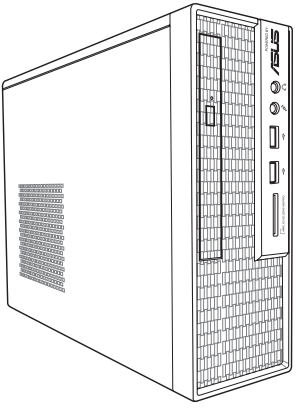
S2-P8H61E

ASUS PC (Desktop Barebone)

User's Manual



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Notices

ASUS Recycling/Takeback Services

ASUS recycling and takeback programs come from our commitment to the highest standards for protecting our environment. We believe in providing solutions for you to be able to responsibly recycle our products, batteries, other components, as well as the packaging materials. Please go to http://csr.asus.com/english/Takeback.htm for the detailed recycling information in different regions.

REACH

Complying with the REACH (Registration, Evaluation, Authorisation, and Restriction of Chemicals) regulatory framework, we published the chemical substances in our products at ASUS REACH website at http://csr.asus.com/english/REACH.htm

Federal Communications Commission Statement

This device complies with Part 15 of the FCC Rules. Operation is subject to the following two conditions:

- This device may not cause harmful interference, and
- This device must accept any interference received including interference that may cause undesired operation.

This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to Part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates, uses and can radiate radio frequency energy and, if not installed and used in accordance with manufacturer's instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

- Reorient or relocate the receiving antenna.
- Increase the separation between the equipment and receiver.
- Connect the equipment to an outlet on a circuit different from that to which the receiver is connected.
- Consult the dealer or an experienced radio/TV technician for help.

WARNING! The use of shielded cables for connection of the monitor to the graphics card is required to assure compliance with FCC regulations. Changes or modifications to this unit not expressly approved by the party responsible for compliance could void the user's authority to operate this equipment.

Canadian Department of Communications Statement

This digital apparatus does not exceed the Class B limits for radio noise emissions from digital apparatus set out in the Radio Interference Regulations of the Canadian Department of Communications.

This class B digital apparatus complies with Canadian ICES-003.

Safety information

Electrical safety

- To prevent electric shock hazard, disconnect the power cable from the electric outlet before relocating the system.
- When adding or removing devices to or from the system, ensure that the power cables for the devices are unplugged before the signal cables are connected. If possible, disconnect all power cables from the existing system before you add a device.
- Before connecting or removing signal cables from the motherboard, ensure that all power cables are unplugged.
- Seek professional assistance before using an adapter or extension cord. These devices could interrupt the grounding circuit.
- Ensure that your power supply is set to the correct voltage in your area. If you are not sure about the voltage of the electrical outlet you are using, contact your local power company.
- If the power supply is broken, do not try to fix it by yourself. Contact a qualified service technician or your retailer.

Operation safety

- Before installing the motherboard and adding devices on it, carefully read all the manuals that came with the package.
- Before using the product, ensure that all cables are correctly connected and the power cables are not damaged. If you detect any damage, contact your dealer immediately.
- To avoid short circuits, keep paper clips, screws, and staples away from connectors, slots, sockets and circuitry.
- Avoid dust, humidity, and temperature extremes. Do not place the product in any area where it may become wet.
- Place the product on a stable surface.
- If you encounter technical problems with the product, contact a qualified service technician or your retailer.

Lithium-Ion Battery Warning

CAUTION: Danger of explosion if battery is incorrectly replaced. Replace only with the same or equivalent type recommended by the manufacturer. Dispose of used batteries according to the manufacturer's instructions.

VORSICHT: Explosionsgetahr bei unsachgemäßen Austausch der Batterie. Ersatz nur durch denselben oder einem vom Hersteller empfohlenem ähnljchen Typ. Entsorgung gebrauchter Batterien nach Angaben des Herstellers.

LASER PRODUCT WARNING

CLASS 1 LASER PRODUCT

About this guide

Audience

This guide provides general information and installation instructions about the ASUS Vintage S2-P8H61E barebone system. This guide is intended for experienced users and integrators with hardware knowledge of personal computers.

How this guide is organized

This guide contains the following parts:

1. **Chapter 1: System introduction**

   This chapter gives a general description of the ASUS S2-P8H61E. The chapter lists the system features, including introduction on the front and rear panel, and internal components.

2. **Chapter 2: Starting up**

   This chapter helps you power up the system and install drivers and utilities from the support DVD.

3. **Chapter 3: Motherboard info**

   This chapter gives information about the motherboard that comes with the system. This chapter includes the motherboard layout, jumper settings, and connector locations.

4. **Chapter 4: BIOS setup**

   This chapter tells how to change system settings through the BIOS Setup menus and describes the BIOS parameters.

Conventions used in this guide

WARNING: Information to prevent injury to yourself when trying to complete a task.

CAUTION: Information to prevent damage to the components when trying to complete a task.

IMPORTANT: Instructions that you MUST follow to complete a task.

NOTE: Tips and additional information to aid in completing a task.

Where to find more information

Refer to the following sources for additional information and for product and software updates.

1. **ASUS Websites**

   The ASUS websites worldwide provide updated information on ASUS hardware and software products. Refer to the ASUS contact information.

2. **Optional Documentation**

   Your product package may include optional documentation, such as warranty flyers, that may have been added by your dealer. These documents are not part of the standard package.

System package contents

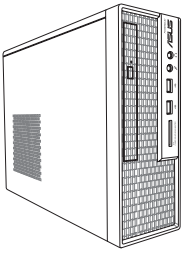
Check your S2-P8H61E system package for the following items.

If any of the items is damaged or missing, contact your retailer immediately.

Item	Description
1.	ASUS S2-P8H61E barebone system with
	• ASUS motherboatd
	• Power supply unit
	• ASUS chassis
2.	Cable
	• AC power cable
3.	Support DVD
4.	Quick Installation Guide

Chapter 1

This chapter gives a general description of the ASUS S2-P8H61E. The chapter lists the system features including introduction on the front and rear panel, and internal components.



System introduction

1.1 Welcome!

Thank you for choosing the ASUS S2-P8H61E!

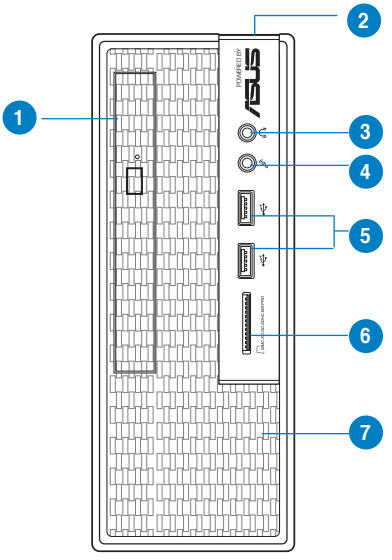
The ASUS S2-P8H61E is an all-in-one barebone system with a versatile home entertainment feature.

The system comes in a stylish casing and powered by the ASUS motherboard that supports the Second Generation Intel® Core™ i7 / Core™ i5 / Core™ i3 processors in the 1155-land package (Use a 65W CPU only).

The system supports up to 16 GB of system memory using DDR3-1333/1066 DIMMs. High-resolution graphics via integrated graphics controller or PCI Express x16 slot, Serial ATA, USB 2.0, and 8-channel audio features take you ahead in the world of power computing.

1.2 Front panel

The front panel includes the optical drive bays, power button, and several I/O ports.

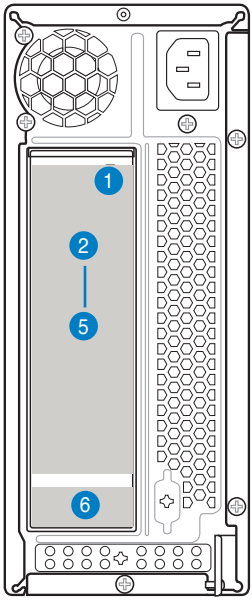


1. **Slim ODD.** This bay is for a slim size optical drive.
2. **Power button.** Press this button to turn the system on.
3. **Headphone port.** This Line In (lime) port connects a headphone with a stereo mini-plug.
4. **Microphone port.** This Mic (pink) port connects a microphone.
5. **USB 2.0 ports.** These Universal Serial Bus 2.0 (USB 2.0) ports are available for connecting USB 2.0 devices such as a mouse, printer, scanner, camera, PDA, and others.
6. **Memory card slot.** Insert a MMC, XD, SD, SDHC, MC/PRO card into this slot.
7. **Air vents.** These vents provide ventilation to your PC.

1.3 Rear panel

The system rear panel includes the power connector and several I/O ports that allow convenient connection of devices.

Do NOT cover the rear vent , and the ambient temperature is limited up to 35oC to prevent the system from overheating.



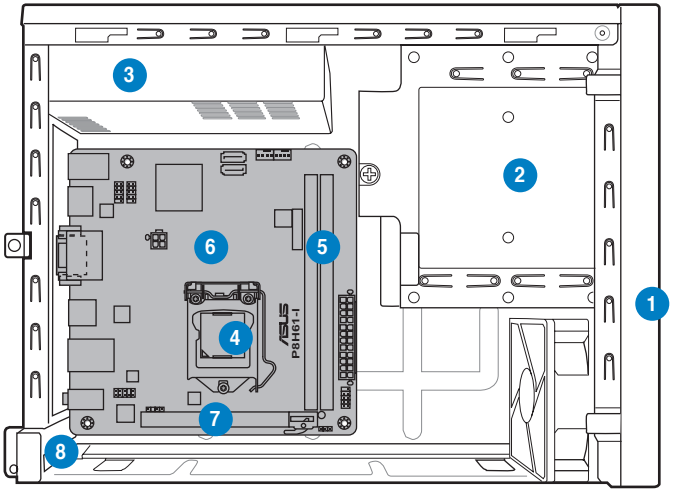
1. PS/2 mouse/keyboard combo port ( )
2. USB 2.0 / USB3.0 ports ( ) *(some models may have four rear USB 2.0 / USB3.0 ports)*
3. One of the following ports:
   - E-SATA port ( )
   - Serial (COM1) port ( )
   - DVI port ( )
   - HDMI port ( )
4. VGA port ( )
5. LAN (RJ-45) port ( )
6. One of the following audio ports configurations:

- 3-channel
- 6-channel
- 8-channel

Refer to the configuration table in the User Guide for details.

1.4 Internal components

The illustration below is the internal view of the system when you remove the chassis cover and the power supply unit. The installed components are labeled for your reference.



1. Front panel cover
2. Slim size optical drive
3. Power supply unit
4. CPU socket
5. DIMM sockets
6. ASUS motherboard
7. PCI Express x16 slot (x16 mode)
8. Metal bracket lock

Refer to the bundled Quick Installation Guide for installing additional system components and get assistance from professionals when you disassemble or assemble the system.

1.5 Qualified Vendors Lists (QVL)

DDR3-1333 MHz capability

Vendors	Part No.	Size	SS/ DS	Chip Brand	Chip NO.	Timing	Voltage	DIMM socket support (Optional)	
								1 DIMM	2 DIMMs
A-Data	AD31333001GOU	1GB	SS	A-Data	AD30908C8D-151C E0906	-	-	•	•
A-Data	AD31333G001GOU	3GB(3 x 1GB)	SS	-	-	8-8-8-24	1.65-1.85V	•	•
A-Data	AD31333002GOU	2GB	DS	A-Data	AD30908C8D-151C E0903	-	-	•	•
A-Data	AD31333G002GMU	2GB	DS	-	-	8-8-8-24	1.65-1.85V	•	•
Apacer	78.A1GC6.9L1	2GB	DS	APACER	AM5D5808DEWSBG	-	-	•	•
Apacer	78.A1GC6.9L1	2GB	DS	Apacer	AM5D5808FEQSBG	9	-	•	•
CORSAIR	CM3X1024-1333C9DHX	1GB	SS	-	-	9-9-9-24	1.60V	•	•
CORSAIR	CM3X1024-1333C9	1GB	SS	-	-	9-9-9-24	1.60V	•	•
CORSAIR	TR3X3G1333C9 G	3GB(3 x 1GB)	SS	-	-	9-9-9-24	1.50V	•	•
CORSAIR	TR3X3G1333C9 G	3GB(3 x 1GB)	SS	-	-	9-9-9-24	1.50V		
CORSAIR	CM3X1024-1333C9DHX	1GB	DS	Corsair	-	-	-	•	•
CORSAIR	CMD24GX3M6A1333C9(XMP)	24GB(6x4GB)	DS	-	-	9-9-9-24	1.60V	•	
CORSAIR	CM3X2048-1333C9DHX	2GB	DS	-	-	-	-		
CORSAIR	CMX8GX3M4A1333C9	8GB(4 x 2GB)	DS	-	-	9-9-9-24	1.50V	•	•
Crucial	CT12864BA1339.8FF	1GB	SS	Micron	9FF22D9KPT	9	-	•	•
Crucial	CT25664BA1339.16FF	2GB	DS	Micron	9KF27D9KPT	9	-	•	•
Crucial	BL25664BN1337.16FF (XMP)	6GB(3 x 2GB)	DS	-	-	7-7-7-24	1.65V	•	•
ELPIDA	EBJ10UE8EDF0-DJ-F	1GB	SS	ELPIDA	J1108EDSE-DJ-F	-	1.35V(low voltage)	•	•
ELPIDA	EBJ21UE8EDF0-DJ-F	2GB	DS	ELPIDA	J1108EDSE-DJ-F	-	1.35V(low voltage)	•	•
G.SKILL	F3-10600CL8D-2GBHK(XMP)	1GB	SS	G.SKILL	-	-	-	•	•
G.SKILL	F3-10666CL7T-3GBPK(XMP)	3GB(3 x 1GB)	SS	-	-	7-7-7-18	1.5~1.6V	•	•
G.SKILL	F3-10666CL9T-3GBNQ	3GB(3 x 1GB)	SS	-	-	9-9-9-24	1.5~1.6V	•	•
G.SKILL	F3-10600CL9D-2GBNQ	1GB	DS	G.SKILL	-	-	-		
G.SKILL	F3-10600CL8D-4GBHK(XMP)	4GB(2 x 2GB)	DS	-	-	8-8-8-21	1.5-1.6V	•	•
G.SKILL	F3-10666CL8D-4GBECO(XMP)	4GB(2 x 2GB)	DS	-	-	8-8-8-24	XMP 1.35V	•	•
G.SKILL	F3-10666CL7T-6GBPK(XMP)	6GB(3 x 2GB)	DS	-	-	7-7-7-18	1.5~1.6V	•	•
G.SKILL	F3-10666CL7D-8GBRH(XMP)	8GB(2 x 4GB)	DS	-	-	7-7-7-21	1.5V	•	•
G.SKILL	F3-10666CL9D-8GBRL	8GB(2 x 4GB)	DS	-	-	9-9-9-24	1.5V	•	•
GEIL	GET316GB1333C9QC	16GB (4x 4GB)	DS	-	-	9-9-9-24	1.5V		
GEIL	GV32GB1333C9DC	2GB(2 x 1GB)	DS	-	-	9-9-9-24	1.5V	•	•
GEIL	GV34GB1333C7DC	2GB	DS	-	-	7-7-7-24	1.5V		
GEIL	GG34GB1333C9DC	4GB(2 x 2GB)	DS	GEIL	GL1L128M88BA12N	9-9-9-24	1.3V(low voltage)		
GEIL	GV34GB1333C9DC	4GB(2 x 2GB)	DS	-	-	9-9-9-24	1.5V	•	•
Hynix	HMT112U6TFR8A-H9	1GB	SS	HYNIX	H5TC1G83TFRH9A	-	1.35V(low voltage)	•	•
HYNIX	HMT325U6BFR8C-H9	2GB	SS	HYNIX	H5TQ2G83BFRH9C	-	-	•	•
Hynix	HMT125U6TFR8A-H9	2GB	DS	HYNIX	H5TC1G83TFRH9A	-	1.35V(low voltage)	•	•
HYNIX	HMT351U6BFR8C-H9	4GB	DS	HYNIX	H5TQ2G83BFRH9C	-	-	•	•
KINGMAX	FLFD45F-B8KL9 NAES	1GB	SS	KINGMAX	KKB8FNWBFGNX-27A	-	-	•	•
KINGMAX	FLFE85F-C8KF9 CAES	2GB	SS	KINGMAX	KFC8FMFXF-DXX-15A	-	-	•	•
KINGMAX	FLFE85F-C8KM9 NAES	2GB	SS	KINGMAX	KFC8FNMXF-BXX-15A	-	-	•	•
KINGMAX	FLFE85F-B8KL9 NEES	2GB	DS	KINGMAX	KKB8FNWBFGNX-26A	-	-	•	•
KINGMAX	FLFF65F-C8KM9 NEES	4GB	DS	KINGMAX	KFC8FNMXF-BXX-15A	-	-	•	•
Kingston	KVR1333D3N9/1G	1GB	SS	ELPIDA	J1108BDBG-DJ-F	9	1.5V	•	•
KINGSTON	KVR1333D3N9/2G	2GB	SS	HYNIX	H5TQ2G83AFRH9C	9	-	•	•
KINGSTON	KVR1333D3N9/2G(low profile)	2GB	DS	ELPIDA	J1108BDBG-DJ-F	9	1.5V	•	•
Kingston	KVR1333D3N9/2G	2GB	DS	KTC	D1288JPNDPLD9U	9	1.5V	•	•
Kingston	KVR1333D3N9/2G	2GB	DS	ELPIDA	J1108BDSE-DJ-F	9	1.5V	•	•

continued on the next page

DDR3-1333 MHz capability

Vendors	Part No.	Size	SS/ DS	Chip Brand	Chip NO.	Timing	Voltage	DIMM socket support (Optional)	
								1 DIMM	2 DIMMs
Kingston	KHX1333C7D3K2/4GX(XMP)	4GB(2 x 2GB)	DS	-	-	7	1.65V	•	•
Kingston	KHX1333C9D3UK2/4GX(XMP)	4GB(2 x 2GB)	DS	-	-	9	XMP 1.25V	•	•
KINGSTON	KVR1333D3N9/4G(low profile)	4GB	DS	HYNIX	H5TQ2G83AFRH9C	9	1.5V	•	•
KINGSTON	KVR1333D3N9/4G	4GB	DS	Hynix	H5TQ2G83AFR	-	-	•	•
MICRON	MT4JTF12864AZ-1G4D1	1GB	SS	MICRON	D9LGQ	-	-	•	•
Micron	MT8JTF12864AZ-1G4F1	1GB	SS	Micron	9FF22D9KPT	9	-	•	•
MICRON	MT8JTF25664AZ-1G4D1	2GB	SS	MICRON	D9LGK	-	-	•	•
Micron	MT16JTF25664AZ-1G4F1	2GB	DS	Micron	9KF27D9KPT	9	-	•	•
MICRON	MT16JTF51264AZ-1G4D1	4GB	DS	MICRON	D9LGK	-	-	•	•
OCZ	OCZ3G1333LV3GK	3GB(3 x 1GB)	DS	-	-	9-9-9-20	1.65V	•	
OCZ	OCZ3F13334GK	4GB(2 x 2GB)	DS	-	-	9-9-9-20	1.7V	•	•
OCZ	OCZ3G13334GK	4GB(2 x 2GB)	DS	-	-	9-9-9-20	1.7V	•	•
OCZ	OCZ3G1333LV4GK	4GB(2 x 2GB)	DS	-	-	9-9-9-20	1.65V	•	•
OCZ	OCZ3P1333LV4GK	4GB(2 x 2GB)	DS	-	-	7-7-7-20	1.65V	•	•
OCZ	OCZ3X13334GK(XMP)	4GB(2 x 2GB)	DS	-	-	7-7-7-20	1.75V	•	•
OCZ	OCZ3G1333LV6GK	6GB(3 x 2GB)	DS	-	-	9-9-9-20	1.65V	•	•
OCZ	OCZ3P1333LV6GK	6GB(3 x 2GB)	DS	-	-	7-7-7-20	1.65V	•	•
OCZ	OCZ3X1333LV6GK(XMP)	6GB(3 x 2GB)	DS	-	-	8-8-8-20	1.60V	•	•
OCZ	OCZ3G1333LV8GK	8GB (2x 4GB)	DS	-	-	9-9-9-20	1.65V	•	•
OCZ	OCZ3RPR1333C9LV8GK	8GB (2x 4GB)	DS	-	-	9-9-9-20	1.65V	•	•
PSC	AL7F8G73D-DG1	1GB	SS	PSC	A3P1GF3DGF	8-8-8-24	1.5V	•	•
PSC	AL7F8G73F-DJ2	1GB	SS	PSC	A3P1GF3FGF	-	-	•	•
PSC	AL8F8G73D-DG1	2GB	DS	PSC	A3P1GF3DGF	8-8-8-24	1.5V	•	•
PSC	AL8F8G73F-DJ2	2GB	DS	PSC	A3P1GF3FGF	-	-	•	•
SAMSUNG	M378B2873FHS-CH9	1GB	SS	SAMSUNG	K4B1G0846F	-	-	•	•
SAMSUNG	M378B5673FH0-CH9	2GB	DS	SAMSUNG	K4B1G0846F	-	-	•	•
SAMSUNG	M378B5273CH0-CH9	4GB	DS	SAMSUNG	K4B2G0846C	-	-	•	•
Super Talent	W1333UA1GH	1GB	SS	HYNIX	H5TQ1G83TFR	9	-	•	•
Super Talent	W1333X2G8(XMP)	1GB	SS	-	-	8	-	•	•
Super Talent	W1333UB2GS	2GB	DS	Samsung	K4B1G0846F	9	-	•	•
Super Talent	W1333UB4GS	4GB	DS	Samsung	K4B2G0846C	-	-	•	•
Super Talent	W1333UX6GM	6GB(3x 2GB)	DS	Micron	0BF27D9KPT.	9-9-9-24	1.5V	•	•

DDR3-1066MHz capability

Vendors	Part No.	Size	SS/ DS	Chip Brand	Chip NO.	Timing	Voltage	DIMM socket support (Optional)	
								1 DIMM	2 DIMMs
Crucial	CT12864BA1067.8FF	1GB	SS	Micron	9GF22D9KPT	7	-	•	•
Crucial	CT25664BA1067.16FF	2GB	DS	Micron	9HF22D9KPT	7	-	•	•
ELPIDA	EBJ10UE8EDF0-AE-F	1GB	SS	ELPIDA	J1108EDSE-DJ-F	-	1.35V(low voltage)	•	•
ELPIDA	EBJ11UD8BAFA-AE-E	1GB	DS	Elpida	J5308BASE-AC-E	-	-	•	•
ELPIDA	EBJ21UE8EDF0-AE-F	2GB	DS	ELPIDA	J1108EDSE-DJ-F	-	1.35V(low voltage)	•	•
KINGSTON	KVR1066D3N7/1G	1GB	SS	KTC	D1288JPNDPLD9U	7	1.5V	•	•
KINGSTON	KVR1066D3N7/2G	2GB	DS	ELPIDA	J1108BDSE-DJ-F	7	1.5V	•	•
KINGSTON	KVR1066D3N7/4G	4GB	DS	Hynix	H5TQ2G83AFR	7	1.5V	•	•
Micron	MT8JTF12864AZ-1G1F1	1GB	SS	Micron	9GF22D9KPT	7	-	•	•
Micron	MT16JTF25664AZ-1G1F1	2GB	DS	Micron	9HF22D9KPT	7	-	•	•
OCZ	OCZ3G1066LV4GK	4GB(2 x 2GB)	DS	Micron	9BF27D9KPV	7-7-7-20	1.65V	•	•

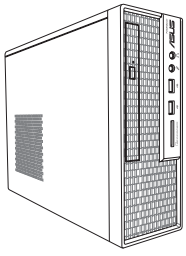
SS: Single-sided / DS: Double-sided
DIMM support:

- **A*:** one (1) module inserted into any slot as single-channel memory configuration. We suggest that you install the module into A2 slot.
- **B*:** two (2) modules inserted into either the blue slots or the black slots as one pair of dual-channel memory configuration. We suggest that you install the modules into slots A2 and B2 for better compatibility.

Visit the ASUS website at www.asus.com for the latest QVLs.

Chapter 2

This chapter helps you power up the system and install drivers and utilities from the support DVD.



Starting up

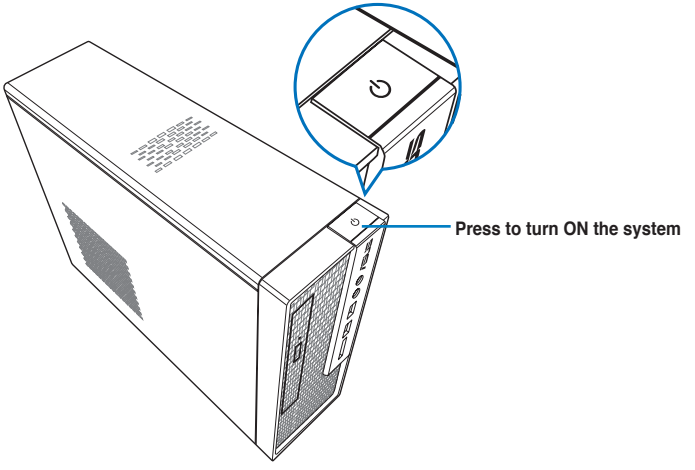
2.1 Installing an operating system

The barebone system supports Windows® 7 operating systems (OS). Always install the latest OS version and corresponding updates so you can maximize the features of your hardware.

Motherboard settings and hardware options vary. Use the setup procedures presented in this chapter for general reference only. Refer to your OS documentation for more information.

2.2 Powering up

Press the system power button (⏻) to enter the OS.



2.3 Support DVD information

The support DVD that came with the system contains useful software and several utility drivers that enhance the system features.

- Screen display and driver options may not be the same for different operating system versions.
- The contents of the support DVD are subject to change at any time without notice. Visit the ASUS website at www.asus.com for updates.

2.3.1 Running the support DVD

To begin using the support DVD, place the DVD in your optical drive. The DVD automatically displays the Drivers menu if Autorun is enabled in your computer.

If Autorun is NOT enabled in your computer, browse the contents of the support DVD to locate the file ASSETUP.EXE from the BIN folder. Double-click the ASSETUP.EXE to run the DVD.

ASUS InstAll

Launches the ASUS InstAll driver installation wizard.

Intel Chipset Driver

Installs the Intel Chipset driver.

VIA Audio Driver

Installs the VIA audio driver and application.

Realtek LAN Driver

Installs the Realtek LAN driver.

Intel Graphics Accelerator Driver

Installs the Intel® Graphics Accelerator driver.

Management Engine Interface

Installs Management Engine Interface utility.

Asmedia USB 3.0 Driver

Installs the Asmedia USB 3.0 driver.

Trend Micro Titanium

Installs the Trend Micro Titanium utility.

Intel Rapid Storage Technology Driver

Installs the Intel® Rapid Storage Technology driver.

The Intel Rapid Storage Technology Driver appears only when the SATA Mode is set to [AHCI Mode].

2.3.2 Utilities menu

The Utilities menu shows the applications that the motherboard supports.

ASUS InstAll

Installs all the utilities through the Installation Wizard.

Realtek Ethernet Utility

Installs the Realtek Ethernet utility.

Adobe Reader X

Installs the Adobe® Reader X that allows you to open, view, and print documents in Portable Document Format (PDF).

ASUS AI Suite II

Installs the ASUS AI Suite II.

ASUS AI Manager

Installs ASUS AI Manager.

ASUS WebStorage

Installs the ASUS WebStorage utility.

ASUS Vibe

Installs the ASUS Vibe utility.

2.3.3 Make Disk menu

The Make disk menu allows you to make a AHCI driver disk.

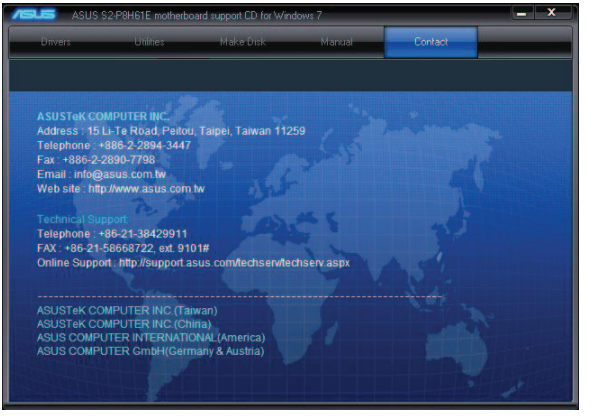
2.3.4 Manual menu

The Manual menu contains the list of supplementary user manuals. Click an item to open the folder of the user manual.

Most user manuals are in Portable Document Format (PDF). Install the Adobe® Reader from the Utilities menu before opening a user manual.

2.3.5 ASUS Contact information

Click the Contact tab to display the ASUS contact information. You can also find this information on the inside front cover of this user guide.



2.3.6 Other information

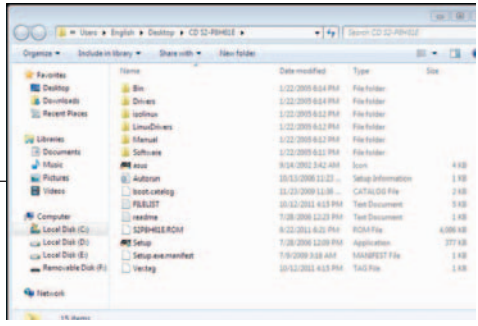
The icons on the top right corner of the screen give additional information on the motherboard and the contents of the support DVD. Click an icon to display the specified information.

Motherboard Info

Displays the general specifications of the motherboard.

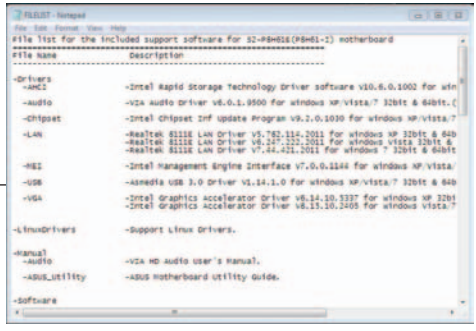
Browse this DVD

Displays the support DVD contents in graphical format.



Filelist

Displays the contents of the support DVD and a brief description of each in text format.


#File list for the included support software for S2-P8H61E(P8H61-I) motherboard
#File Name Description
-Drivers
-AHCI -Intel Rapid Storage Technology Driver software v10.6.0.1002 for win
-Audio -VIA Audio Driver v6.0.1.9500 for Windows XP/Vista/7 32bit & 64bit.
-Chipset -Intel Chipset Inf Update Program V9.2.0.1030 for Windows XP/Vista/7
-LAN -Realtek 8111E LAN Driver V5.762.114.2011 for Windows XP 32bit & 64b
-Realtek 8111E LAN Driver V6.247.222.2011 for Windows Vista 32bit &
-Realtek 8111E LAN Driver V7.44.421.2011 for Windows 7 32bit & 64bit
-MEI -Intel Management Engine Interface v7.0.0.1144 for Windows XP/Vista/
-USB -asmedia USB 3.0 Driver v1.14.1.0 for Windows XP/Vista/7 32bit & 64b
-VGA -Intel Graphics Accelerator Driver V8.14.10.3337 for Windows XP 32bi
-Intel Graphics Accelerator Driver V8.15.10.2405 for Windows Vista/7
-LinuxDrivers -Support Linux Drivers.
-Manual
-Audio -VIA HD Audio User's Manual.
-ASUS_Utility -ASUS Motherboard Utility Guide.
-Software

2.4 Software information

Most of the applications in the support DVD have wizards that will conveniently guide you through the installation. View the online help or readme file that came with the software for more information.

2.4.1 AI Suite II

ASUS AI Suite II is an all-in-one interface that integrates several ASUS utilities and allows users to launch and operate these utilities simultaneously.

Installing AI Suite II

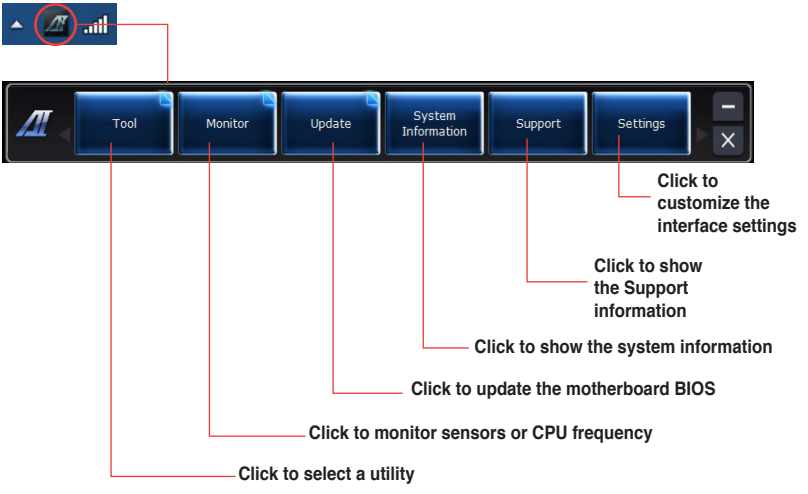
To install AI Suite II:

1. Place the support DVD in the optical drive. The Drivers installation tab appears if your computer has enabled the Autorun feature.
2. Click the **Utilities** tab, then click **ASUS AI Suite II.**
3. Follow the onscreen instructions to complete the installation.

Using AI Suite II

AI Suite II automatically starts when you enter the Windows® operating system (OS). The AI Suite II icon appears in the Windows® notification area. Click the icon to open the AI Suite II main menu bar.

Click each button to select and launch a utility, to monitor the system, to update the motherboard BIOS, to display the system information, and to customize the settings of AI Suite II.



EPU

EPU is an energy-efficient tool that satisfies different computing needs. This utility provides several modes that you can select to save system power. Selecting Auto mode will have the system shift modes automatically according to current system status.

Launching EPU

After installing AI Suite II from the support DVD, launch EPU by clicking **Tool > EPU** on the AI Suite II main menu bar.

Displays current mode

The items lighting up means power saving engine is activated

Displays the amount of CO2 reduced

*Shifts between the display of Total and Current CO2 reduced

Displays the current CPU power

Advanced settings for each mode

Displays the system properties of each mode

Multiple system operating modes

*• Select **From EPU Installation** to show the CO2 that has been reduced since you installed EPU.

*• Select **From the Last Reset** to show the total CO2 that has been reduced since you click the Clear button Clear.

Probe II

Probe II is a utility that monitors the computer's vital components, and detects and alerts you of any problem with these components. Probe II senses fan rotations, CPU temperature, and system voltages, among others. With this utility, you are assured that your computer is always at a healthy operating condition.

Launching Probe II

After installing AI Suite II from the support DVD, launch Probe II by clicking Tool > Probe II on the AI Suite II main menu bar.

Configuring Probe II

Click the Voltage/Temperature/Fan Speed tabs to activate the sensors or to adjust the sensor threshold values. The Preference tab allows you to customize the time interval of sensor alerts, or change the temperature unit.

Saves your configuration

Loads your saved configuration

Loads the default threshold values for each sensor

Applies your changes

Sensor Recorder

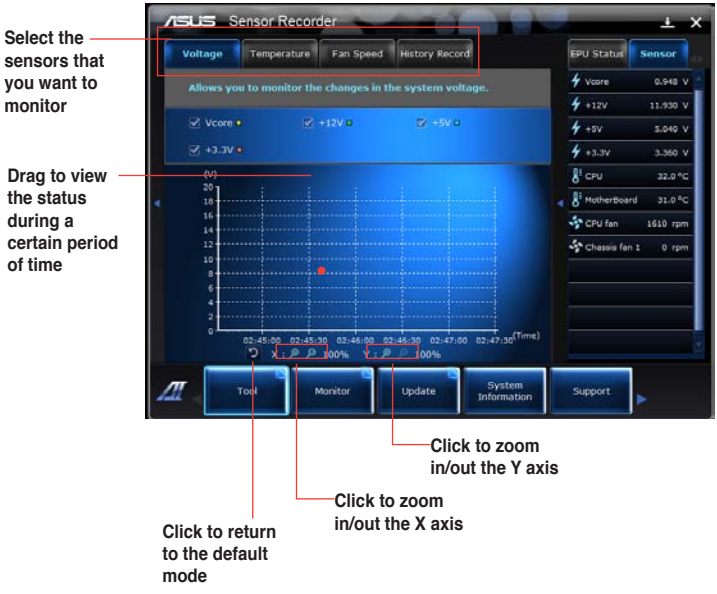
Sensor Recorder allows you to monitor the changes in the system voltage, temperature, and fan speed, as well as recording the changes.

Launching Sensor Recorder

After installing AI Suite II from the support DVD, **click Tool** > **Sensor Recorder** on the AI Suite II main menu bar to launch PC Probe .

Configuring Sensor Recorder

Click the **Voltage/Temperature/Fan Speed** tabs and select the sensors that you want to monitor. The **History Record** tab allows you to record the changes in the sensors that you enable.



Ai Charger+

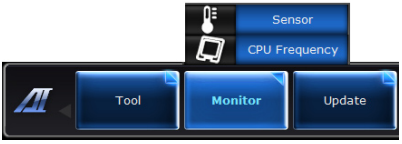
Battery Charging Version 1.1 (BC 1.1), a USB Implementers Forum (USB-IF) certified USB charging function, is designed to make USB charging faster than the standard USB devices. If your USB device supports the BC 1.1 function*, when you connect your USB device to your system, the system automatically detects your USB device and starts a fast USB charging. The charging speed may get 3 times faster than that of the standard USB devices**.

- * Check your USB device manufacturer if it fully supports the BC 1.1 function.
- ** The actual charging speed may vary with your USB device's conditions.
- Ensure to remove and reconnect your USB device after enabling or disabling Ai Charger+ to ensure normal charging function.

Ai Charger+
Welcome to a new level in USB 3.0 fast-charging experience with the ASUS Ai Charger+, a new and improved version of the unique and fast-charging software Ai Charger*. With Ai Charger+, you can now charge BC 1.1** standard mobile devices 3X*** faster than before aside from conveniently charging your iPhone, iPod, or iPad using it's easy and user-friendly interface.
*ASUS Ai Charger is a unique and fast-charging software that supports the iPhone, iPod, and iPad.
**Contact the manufacturer of your USB mobile device to check if it supports the BC 1.1 function.
***Actual charging time may vary depending on the type, speed, and specifications of the USB device attached.
Enable
Disable
3X
Speed
Apply
Tool
Monitor
Update

Monitor

The Monitor section includes the Sensor and CPU Frequency panels.



Sensor

The Sensor panel displays the current value of a system sensor such as fan rotation, CPU temperature, and voltages. Click **Monitor > Sensor** on the AI Suite II main menu bar to launch the Sensor panel.

CPU Frequency

The CPU Frequency panel displays the current CPU frequency and CPU usage. Click **Monitor > CPU Frequency** on the AI Suite II main menu bar to open the CPU Frequency panel.

Resident in the right pane (system information area)

Sensor panel

CPU Frequency panel

Update

The Update section allows you to update the motherboard BIOS and the BIOS boot logo with the ASUS designed update utilities.

ASUS Update

The ASUS Update is a utility that allows you to manage, save, and update the motherboard BIOS in Windows® OS. The ASUS Update utility allows you to update the BIOS directly from the Internet, download the latest BIOS file from the Internet, update the BIOS from an updated BIOS file, save the current BIOS file or view the BIOS version information.

Updating the BIOS through the Internet

To update the BIOS through the Internet:

1. From the ASUS Update screen, select **Update BIOS from Internet**, and then click **Next**.

2. Select the ASUS FTP site nearest you to avoid network traffic.

   If you want to enable the BIOS downgradable function and auto BIOS backup function, check the checkboxs before the two items on the screen.

3. Select the BIOS version that you want to download. Click **Next**.

   When there is not updated version detected, it is shown as the screen on the right side.

4. You can decide whether to change the BIOS boot logo, which is the image appearing on screen during the Power-On Self-Tests (POST). Click **Yes** if you want to change the boot logo or **No** to continue.

5. Follow the onscreen instructions to complete the update process.

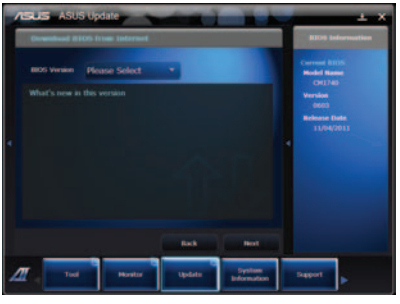
Download BIOS from Internet

To download BIOS from Internet:

1. From the ASUS Update screen, select **Download BIOS from Interent**, and then click **Next**.

2. Select the ASUS FTP site nearest you to avoid network traffic, and click **Next**.

3. Select the BIOS version that you want to download, and click **Next**.



4. Click **Finish** to complete the process.

Updating the BIOS through a BIOS file

To update the BIOS through a BIOS file:

1. From the ASUS Update screen, select **Update BIOS from file**, and then click **Next**.

2. Locate the BIOS file, click **Open**, and click **Next**.

3. Click **Yes** if you want to change the boot logo or **No** to continue.
4. Follow the onscreen instructions to complete the update process.

Save BIOS to file

To save BIOS to file:

1. From the ASUS Update screen, select **Save BIOS to file**, and then click **Next**.

2. Click **Browse** to specify the file path and assign a name to the BIOS file. Click **Save**.

3. Click **Finish** to complete the process.

ASUS MyLogo

The ASUS MyLogo utility lets you customize the boot logo. The boot logo is the image that appears on screen during the Power-On Self-Tests (POST). ASUS MyLogo is automatically installed when you install the ASUS Update utility from the Support DVD.

- Obtain the latest BIOS file from the ASUS website at **www.asus.com**.
- You can create your own boot logo image in GIF file format.

To update the BIOS boot logo:

1. From the ASUS Update screen, select **MyLogo**, and then click **Next**.
2. Select **Change the BIOS boot logo of my motherboard**, then click **Next**.

MyLogo
What do you want to update?
Change the BIOS boot logo of my motherboard.
Change the boot logo of a downloaded BIOS file and update the BIOS to my motherboard.
Change the boot logo of a downloaded BIOS file (But do not update this BIOS to my motherboard.)
Next
Tool
Monitor
Update

3. Locate the picture that you want to use as your BIOS boot logo, then click **Next**.

4. Select your desired size for the boot logo. Click **Next**.

5. The system starts updating the BIOS and loading the new boot logo.

6. Click **Yes** if you want the changes to take effect immediately.
7. Follow the onscreen instructions to complete the update process.

To change the BIOS file's boot logo and update the BIOS to the motherboard:

1. From the ASUS Update screen, select **MyLogo**, and then click **Next**.
2. Select **Change the boot logo of a downloaded BIOS file and update this BIOS to my motherboard**, then click **Next**.

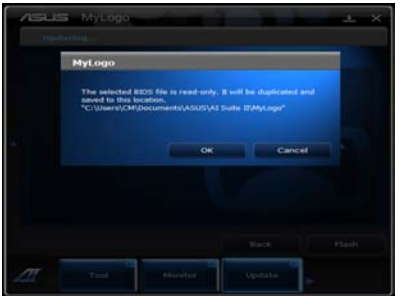
MyLogo
What do you want to update?
Change the BIOS boot logo of my motherboard.
Change the boot logo of a downloaded BIOS file and update this BIOS to my motherboard.
Change the boot logo of a downloaded BIOS file (But do not update this BIOS to my motherboard.)
Next
Tool
Monitor
Update

3. Locate the picture that you want to use as your BIOS boot logo, then click **Next**.

4. Select your desired size for the boot logo. Click **Next**.

5. The system starts updating the BIOS and loading the new boot logo.

6. Click **OK** on the confirmation message.



This screen appears only when you run the software from the Support CD.

7. Click **Yes** if you want the changes to take effect immediately.
8. Follow the onscreen instructions to complete the update process.

To change the BIOS files's boot logo without updating the BIOS to the motherboard:

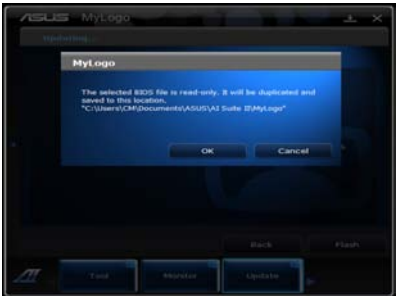
1. From the ASUS Update screen, select **MyLogo**, and then click **Next**.
2. Select **Change the boot logo of a downloaded BIOS file (But do not update this BIOS to my motherboard.)**, then click **Next**.

MyLogo
What do you want to update?
Change the BIOS boot logo of my motherboard.
Change the boot logo of a downloaded BIOS file and update the BIOS to my motherboard.
Change the boot logo of a downloaded BIOS file (But do not update the BIOS to my motherboard.)
Next
Tool
Monitor
Update

3. Locate the picture that you want to use as your BIOS boot logo, then click **Next**.

4. Select your desired size for the boot logo. Click **Next**.

5. Click **OK** on the confirmation message.



This screen appears only when you run the software from the Support CD.

6. Follow the onscreen instructions to complete the update process.

MyLogo
Finished.
ASUS MyLogo successfully updated the boot logo in the BIOS file stored in the disk. If you want to update the BIOS in your motherboard with this BIOS file (with the updated boot logo), use ASUS update.
Home
Tool
Monitor
Update

System Information

The System Information section displays the information about the motherboard, CPU and memory slots and disks.

- Click the **MB** tab to see the details on the motherboard manufacturer, product name, version, and BIOS.

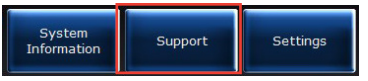
- Click the **CPU** tab to see the details on the processor and the Cache.

- Click the **Memory** tab and then select the memory slot to see the details on the memory module installed on the corresponding slot.

- Click the **Disk** tab and then select the disk volumn to see the details in the disks installed in the system.

Support

The Support section displays the ASUS support information.



Support
ASUSTeK Computer - International Web Site
ASUSTeK Computer - Online Technical Support Web Site
ASUSTeK Computer - Online Download Support Web Site
ASUSTeK Computer - Contact Information
Update
System Information
Support

Settings

The Settings section allows you to customize the main menu bar settings and the interface's skin.

- Application allows you to select the application that you want to enable.

- Bar allows you to modify the bar setting,

2.4.2 ASUS AI Manager

ASUS AI Manager is a utility that gives you quick and easy access to frequently-used applications.

Installing AI Manager

To install AI Manager on your computer:

1. Place the support CD in the optical drive. If Autorun is enabled, the Drivers installation wizard appears.

If Autorun is not enabled in your computer, locate the setup.exe file from the ASUS AI Manager folder in the support CD. Double-click the setup.exe file to start installation.

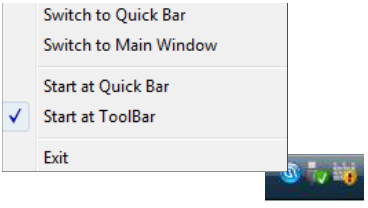
2. Click the **Utilities** tab, then click **ASUS AI Manager**.
3. Follow the screen instructions to complete the installation.

Launching AI Manager

To launch the AI Manager from the Windows® desktop, click **Start > All Programs > ASUS > AI Manager 1.xx.xx > AI Manager**. The AI Manager quick bar appears on the desktop.

After launching the application, the AI Manager icon appears in the Windows® taskbar.

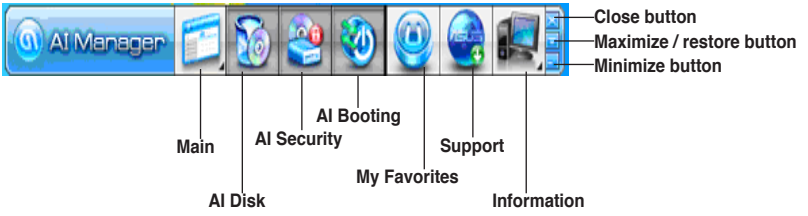
Right-click this icon to switch between quick bar and main window, and to launch the AI Manager either from the quick bar or taskbar.



AI Manager quick bar

The AI Manager quick bar saves the desktop space and allows you to launch the ASUS utilities or display system information easily. Click the **Main**, **My Favorites**, **Support** or **Information** tab to display the menu's contents.

Click the Maximize/restore button to switch between full window and quick bar. Click the Minimize button to keep the AI Manager on the taskbar. Click the Close button to quit the AI Manager.



Main

The Main menu contains two utilities: **AI Disk** and **AI Security**. Click the arrow on the Main menu icon to browse through the utilities in the main menu.

AI Disk

AI Disk allows you to easily clear temporary IE files, IE cookies, IE URLs, IE history, or the Recycle Bin. Click the AI Disk icon on the quick bar to display the full AI Disk window and select the items you want to clear. Click **Apply** when done.

AI Security

AI Security enables you to set a password to secure your devices, such as USB flash disks and CD/DVD disks, from unauthorized access.

To lock a device:

1. When using AI Security for the first time, you are asked to set a password. Enter a password with at most 20 alphanumeric characters.
2. Confirm the password.
3. Key in the password hint (recommended).
4. When done, click **Ok**.
5. Select the device you want to lock, then click **Apply**.
6. Key in the password you have set previously, then click **Ok**. The selected device is locked and not accessible.

To unlock the selected device:

1. Uncheck the checkbox of the selected device, then click **Apply**.
2. Key in the password you have set previously, then click **Ok**. The selected device is unlocked.

To change password:

Click **Change Password**, then follow the on-screen instructions to change password.

AI Booting

AI Booting allows you to specify the boot device priority sequence.

To specify the boot sequence:

1. Select a device, then click on the left/right button to specify the boot sequence.
2. When done, press Apply.

My Favorites

My Favorites allows you to add applications that you frequently use, saving you from searching for the applications throughout your computer.

To add an application:

1. Click **Add**, then locate the application you want to add to **My Favorites**.
2. Click **Open** on the file location window. The application is added to **My Favorites** list.

Right click on the application icon to launch, delete, or rename the selected application. You can also double click to launch the selected application.

Support

Click any links on the **Support** window to go to the ASUS website, technical support website, download support website, or contact information.

Information

The **Information** menu displays the general information of your system, motherboard, CPU, BIOS, memory, and other devices installed.

2.4.3 ASUS Webstorage

ASUS webstorage is designed to help you retrieve your data to your notebooks, smartphones or tablets wherever there is internet connection.

Installing webstorage

To install webstorage:

Place the support DVD in the optical drive. Double-click the setup.exe file from the ASUS WebStorage folder in the Software folder in the support DVD.

Launching Webstorage

To launch the WebStorage from the Windows® desktop, click **Start > All Programs > ASUS > Webstorage**. The webstorage quick bar appears in the Windows® taskbar. Right-click this icon to switch between the quick bar and the main window

ASUS WebStorage
Drive
Backup
Drag your favorite application here
Welcome!
ASUS WebStorage not only provides you the online backup with highest security standards, but also utilizes Cloud Computing technology to develop diversified applications. Let's explore them all!
MySyncFolder
Calendar
BookmarkSyncer
Mobile App
Go to Web

Drive

Allows your to retrieve all your backups, synced files, share groups and password protected data from here. Right-click the mouse to preview files before downloading or generating a sharing URL.

Backup

To backup your most important data with simple steps: preset a backup shcedule with your preferences in cloud storage; or select “Auto Backup” for complete data backup.

MySyncFolder

To store the updated files to MySyncFolder for easy access and share of all types of files without the limitation of location or device.

Calendar

ASUS WebStorage automatically syncs the most updated calendar events to all personal computers so that you know the exact events no matter which PC is in use.

BookmarkSyncer

The convenient BookmarkSyncer keeps our browser preference and bookmark to the cloud automatically synchronized in multiple computer.

MobileApp

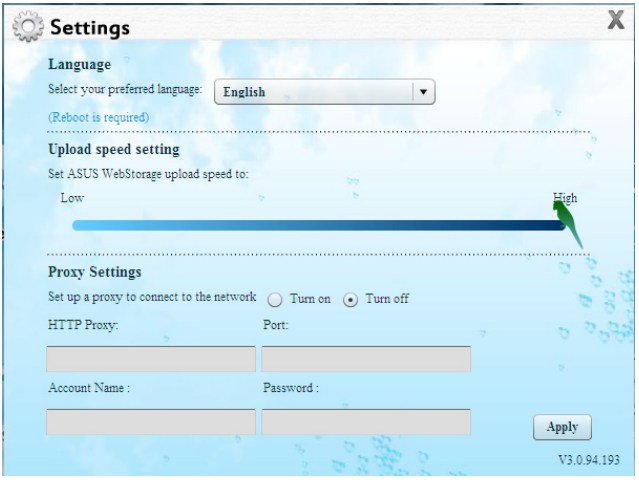
ASUS WebStorage mobile applications sync your files between multiple devices. It also supports transcoding technology that allows preview and files streaming on your mobile phone.

Go to Web

Experience the value-added cloud service through ASUS WebStorage, without the risk of losing data.

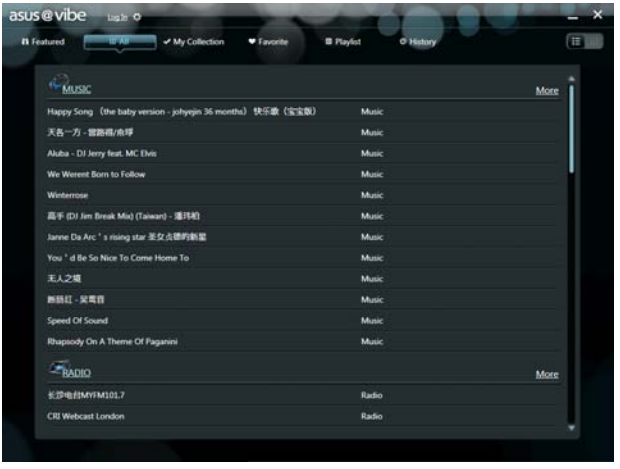
Settings

1. Click the **Settings** icon , the settings interface appears.
2. Follow the onscreen instructions to complete the configuration.



2.4.4 ASUS @ Vibe

ASUS @Vibe is a one-stop, preinstalled repository that provides access to a wide variety of content and allows you to access content including music, videos, radio stations, games, magazines, e-books, e-learning materials, and Live TV.



Gaming

Allows you to enjoy free one hour trial to test out a huge range of casual games and full game versions exclusive to ASUS users.

Learning

Select online learning courses for elementary, junior, and graduate levels.

Magazines

Read popular publications, all in high-resolution and fully accessible online!

Music

Provides tracks for every genre fan - hip hop, top 40, classical and more, with new songs constantly added.

Radio

Tune in instantly to hundreds of diverse local and international radio stations.

Books

Allows you to choose and read over half a million titles online.

Live TV

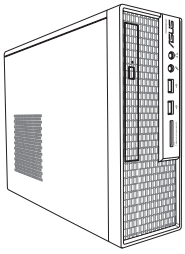
Watch popular series on your PC through ASUS@Vibe, from classics to the latest shows.

Video

Provides an entire library of videos.

Chapter 3

This chapter gives information about the motherboard that comes with the system. This chapter includes the motherboard layout, jumper settings, and connector locations.

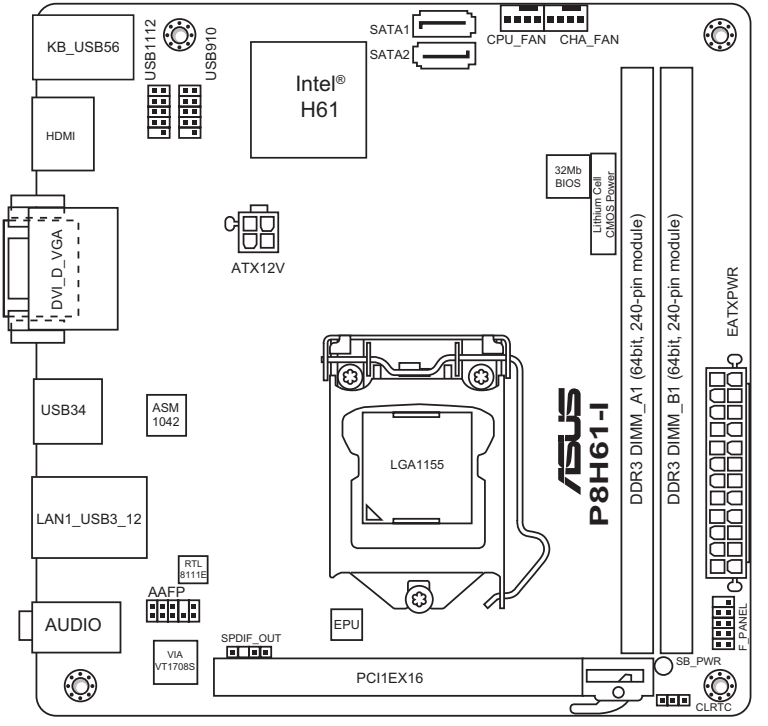


Motherboard info

3.1 Introduction

The Vintage S2-P8H61E barebone system comes with an ASUS motherboard. This chapter provides technical information about the motherboard for future upgrades or system reconfiguration.

3.2 Motherboard layout



3.3 Jumper

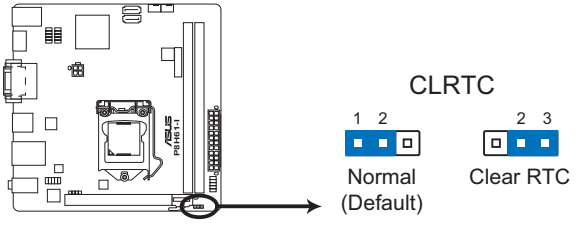
Clear RTC RAM (3-pin CLRTC)

This jumper allows you to clear the Real Time Clock (RTC) RAM in CMOS. You can clear the CMOS memory of date, time, and system setup parameters by erasing the CMOS RTC RAM data. The onboard button cell battery powers the RAM data in CMOS, which include system setup information such as system passwords.

To erase the RTC RAM:

1. Turn OFF the computer and unplug the power cord.
2. Move the jumper cap from pins 1-2 (default) to pins 2-3. Keep the cap on pins 2-3 for about 5-10 seconds, then move the cap back to pins 1-2.
3. Plug the power cord and turn ON the computer.
4. Hold down the **<Del>** key during the boot process and enter BIOS setup to re-enter data.

Except when clearing the RTC RAM, never remove the cap on CLRTC jumper default position. Removing the cap will cause system boot failure!



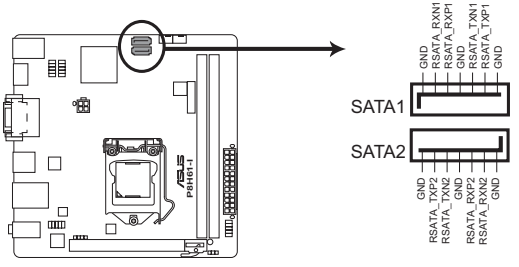
P8H61-I Clear RTC RAM

- If the steps above do not help, remove the onboard battery and move the jumper again to clear the CMOS RTC RAM data. After clearing the CMOS, reinstall the battery.
- You do not need to clear the RTC when the system hangs due to overclocking. For system failure due to overclocking, use the CPU Parameter Recall (C.P.R.) feature. Shut down and reboot the system, then the BIOS automatically resets parameter settings to default values.

3.4 Connectors

1. Intel® H61 Serial ATA 3.0Gb/s connectors (7-pin SATA3G_1/2)

These connectors are for the Serial ATA signal cables for Serial ATA 3Gb/s or 6Gb/s hard disk and optical disk drives.

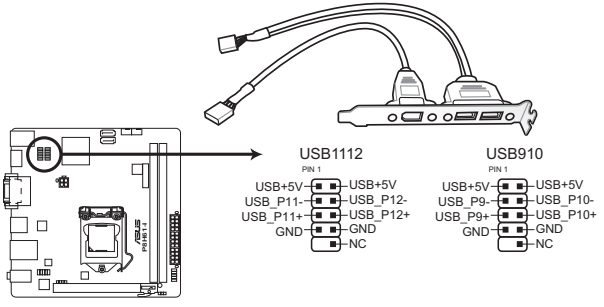


P8H61-I SATA connectors

You must install Windows® XP Service Pack 3 or later version before using Serial ATA hard disk drives.

2. USB connectors (10-1 pin USB910, USB1112)

These connectors are for USB 2.0 ports. Connect the USB module cable to any of these connectors, then install the module to a slot opening at the back of the system chassis. These USB connectors comply with USB 2.0 specification that supports up to 480 Mbps connection speed.



P8H61-I USB2.0 connectors

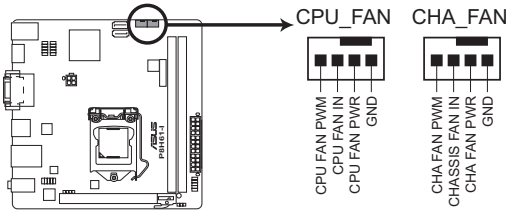
Never connect a 1394 cable to the USB connectors. Doing so will damage the motherboard!

- The USB module is purchased separately.
- Connect the USB header to the front I/O port with USB port cable and card reader cable.

3. CPU and chassis fan connectors (4-pin CPU_FAN, 3-pin CHA_FAN)

Connect the fan cables to the fan connectors on the motherboard, ensuring that the black wire of each cable matches the ground pin of the connector.

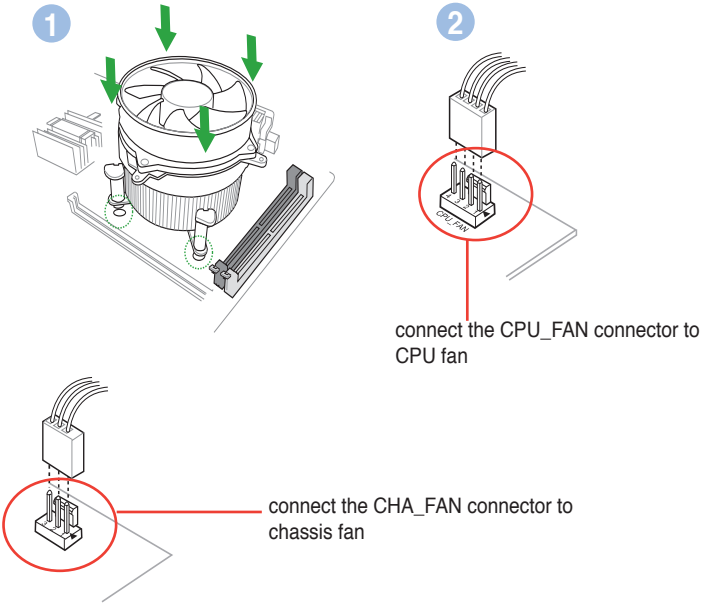
DO NOT forget to connect the fan cables to the fan connectors. Insufficient air flow inside the system may damage the motherboard components. These are not jumpers! **DO NOT** place jumper caps on the fan connectors!



P8H61-I fan connectors

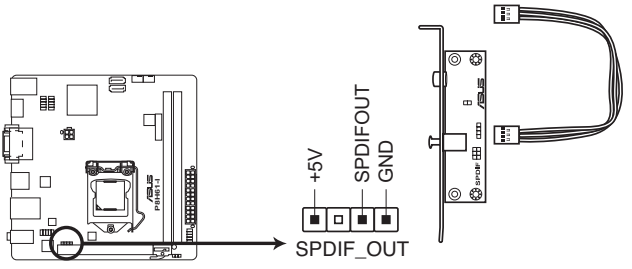
Only the 4-pin CPU fan supports the ASUS Q-Fan2 feature.

Follow these steps to connect the CPU fan and chassis fan:



4. Digital Audio connector (4-1 pin SPDIF_OUT)

This connector is for the S/PDIF audio module to allow digital sound output. Connect one end of the S/PDIF audio cable to this connector and the other end to the S/PDIF module.

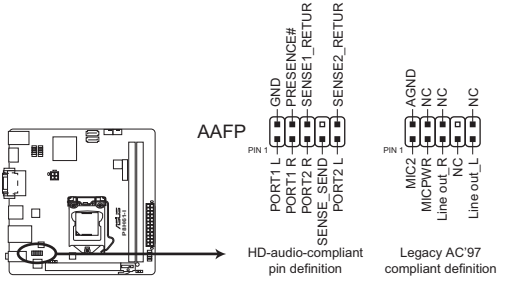


P8H61-I Digital audio connector

The S/PDIF out module is purchased separately.

5. Front panel audio connector (10-1 pin AAFP)

This connector is for a chassis-mounted front panel audio I/O module that supports either HD Audio or legacy AC'97 audio standard.

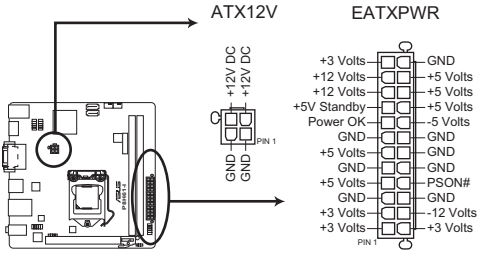


P8H61-I Front panel audio connector

- We recommend that you connect a high-definition front panel audio module to this connector to avail of the motherboard's high-definition audio capability.
- By default, this connector is set to HD Audio. If you want to connect a High Definition front panel audio module to this connector, set the HD Audio Controller item in the BIOS to [Enabled]. See section "**4.5.6 Onboard Devices Configuration**" for details.
- Connect this connector to the front panel.

6. ATX power connectors (24-pin EATXPWR, 4-pin ATX12V)

These connectors are for ATX power supply plugs. The power supply plugs are designed to fit these connectors in only one orientation. Find the proper orientation and push down firmly until the connectors completely fit.

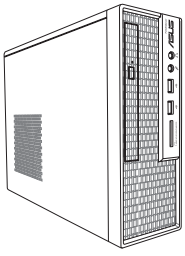


P8H61-I ATX power connectors

- **DO NOT** forget to connect the 4-pin ATX12V power plug; otherwise, the system will not boot.
- We recommend that you use a PSU with higher power output when configuring a system with more power-consuming devices or when you intend to install additional devices. The system may become unstable or may not boot up if the power is inadequate.

Chapter 4

This chapter tells how to change system settings through the BIOS Setup menus and describes the BIOS parameters.



BIOS setup

4.1 Managing and updating your BIOS

BIOS (Basic Input and Output System) stores system settings such as storage device configuration, overclocking settings, advanced power management, and boot device configuration that are needed for system startup in the motherboard CMOS. In normal circumstances, the default BIOS settings apply to most conditions to ensure optimum performance. DO NOT change the default BIOS settings except in the following circumstances:

- An error message appears on the screen during the system startup and requests you to run the BIOS setup.
- You have installed a new system component that requires further BIOS settings or update.

- Inappropriate BIOS settings may result to system instability or boot failure. We strongly recommend that you change the BIOS settings with the help of a trained service personnel.
- BIOS updating is potentially risky. If there is no problem in using the current BIOS version, DO NOT manually update the BIOS. Inappropriate BIOS updating may result to system boot failure.

- Save a copy of the original motherboard BIOS file to a USB flash disk in case you need to restore the BIOS in the future. Copy the original motherboard BIOS using the ASUS Update utility.
- Download the latest BIOS file from the ASUS website at www.asus.com

4.1.1 ASUS Update utility

ASUS Update is a utility that allows you to manage, save, and update the motherboard BIOS in Windows® environment.

- ASUS Update requires an Internet connection either through a network or an Internet Service Provider (ISP).
- This utility is available in the support DVD that comes with the motherboard package.

Installing ASUS Update

To install ASUS Update:

1. Place the support DVD in the optical drive. The **Drivers** menu appears.
2. Click the **Utilities** tab, then click **ASUS Update**.
3. Follow the onscreen instructions to complete the installation.

Quit all Windows® applications before you update the BIOS using this utility.

Updating the BIOS

To update the BIOS:

1. From the Windows® desktop, click **Start > Programs > ASUS > AI Suite II > AI Suite II X.XX.XX** to launch the AI Suite II utility. The AI Suite II Quick Bar appears.
2. Click **Update** button from the Quick Bar, and then click **ASUS Update** from the popup menu. The **ASUS Update** main screen appears. From the list, select either of the following methods:

   Updating from the Internet

   a. Select **Update BIOS from the Internet**, then click **Next**.

   b. Select the ASUS FTP site nearest you to avoid network traffic, then click **Next**.

   c. From the FTP site, select the BIOS version that you wish to download then click Next.

The ASUS Update utility is capable of updating itself through the Internet. Always update the utility to avail all its features.

   Updating from a BIOS file

   a. Select **Update BIOS from file**, then click **Next**.

   b. Locate the BIOS file from the **Open** window, then click **Open**.

3. Follow the onscreen instructions to complete the updating process.

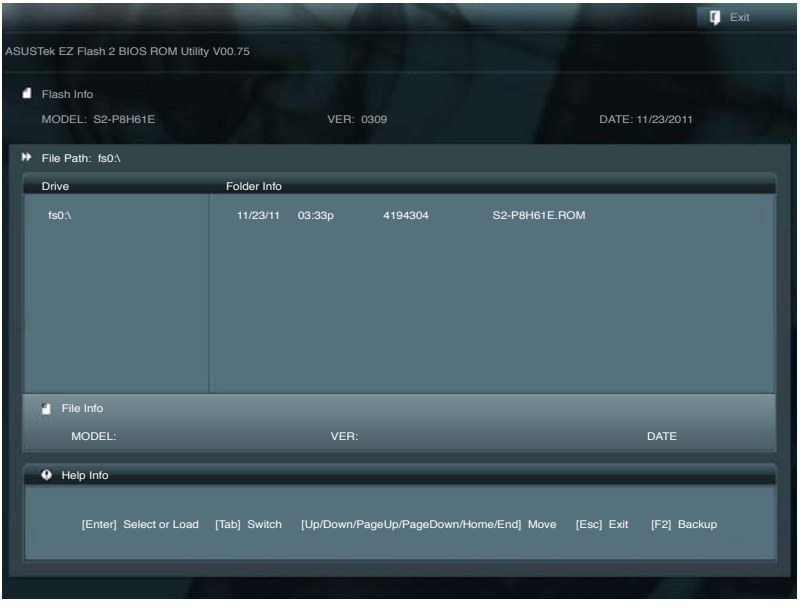
4.1.2 ASUS EZ Flash 2

The ASUS EZ Flash 2 feature allows you to update the BIOS without using an OS-based utility.

Before you start using this utility, download the latest BIOS file from the ASUS website at www.asus.com

To update the BIOS using EZ Flash 2:

1. Insert the USB flash disk that contains the latest BIOS file to the USB port.
2. Enter the **Advanced Mode** of the BIOS setup program. Go to the **Tool** menu to select **ASUS EZ Flash Utility** and press <Enter> to enable it.



3. Press <Tab> to switch to the **Drive** field.
4. Press the Up/Down arrow keys to find the USB flash disk that contains the latest BIOS, and then press <Enter>.
5. Press <Tab> to switch to the **Folder Info** field.
6. Press the Up/Down arrow keys to find the BIOS file, and then press <Enter> to perform the BIOS update process. Reboot the system when the update process is done.

- This function supports USB flash disks with **FAT 32/16** format and single partition only.
- DO NOT support USB 3.0 port.
- DO NOT shut down or reset the system while updating the BIOS to prevent system boot failure!

4.1.3 ASUS CrashFree BIOS 3

The ASUS CrashFree BIOS 3 is an auto recovery tool that allows you to restore the BIOS file when it fails or gets corrupted during the updating process. You can restore a corrupted BIOS file using the motherboard support DVD or a USB flash drive that contains the updated BIOS file.

The BIOS file in the support DVD may not be the latest version. Download the latest BIOS file from the ASUS website at www.asus.com

Recovering the BIOS

To recover the BIOS:

1. Turn on the system.
2. Insert the support DVD to the optical drive or the USB flash drive that contains the BIOS file to the USB port.
3. The utility automatically checks the devices for the BIOS file. When found, the utility reads the BIOS file and enters ASUS EZ Flash 2 utility automatically.
4. The system requires you to enter BIOS Setup to recover BIOS setting. To ensure system compatibility and stability, we recommend that you press <F5> to load default BIOS values.

- DO NOT shut down or reset the system while updating the BIOS! Doing so can cause system boot failure!
- DO NOT support USB 3.0 port.
- When running Crash Free BIOS, the loading time varies with different USB devices.

Ensure to load the BIOS default settings to ensure system compatibility and stability. Select the **Load Optimized Defaults** item under the **Exit** menu. Refer to section **4.8 Exit menu** for details.

4.1.4 ASUS BIOS Updater

The ASUS BIOS Updater allows you to update BIOS in DOS environment. This utility also allows you to copy the current BIOS file that you can use as a backup when the BIOS fails or gets corrupted during the updating process.

The succeeding utility screens are for reference only. The actual utility screen displays may not be same as shown.

Before updating the BIOS

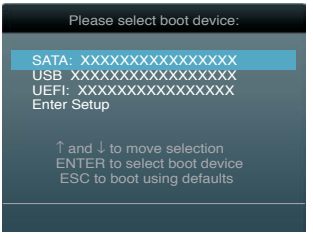
1. Prepare the motherboard support DVD and a USB flash drive in FAT32/16 format and single partition.
2. Download the latest BIOS file and BIOS Updater from the ASUS website at http://support.asus.com and save them on the USB flash drive.

- NTFS is not supported under DOS environment. Do not save the BIOS file and BIOS Updater to a hard disk drive or USB flash drive in NTFS format.
- Do not save the BIOS file to a floppy disk due to low disk capacity.
- DO NOT support USB 3.0 port.

3. Turn off the computer and disconnect all SATA hard disk drives (optional).

Booting the system in DOS environment

1. Insert the USB flash drive with the latest BIOS file and BIOS Updater to the USB port.
2. Boot your computer. When the ASUS Logo appears, press <F8> to show the **BIOS Boot Device Select Menu**. Insert the support DVD into the optical drive and select the optical drive as the boot device.



3. When the **Make Disk** menu appears, select the **FreeDOS command prompt** item by pressing the item number.
4. At the FreeDOS prompt, type **d:** and press <Enter> to switch the disk from Drive C (optical drive) to Drive D (USB flash drive).

```
Welcome to FreeDOS (http://www.freedos.org)!
C:\>d:
D:\>
```

Backing up the current BIOS

Ensure that the USB flash drive is not write-protected and has at least 1024KB free space to save the file.

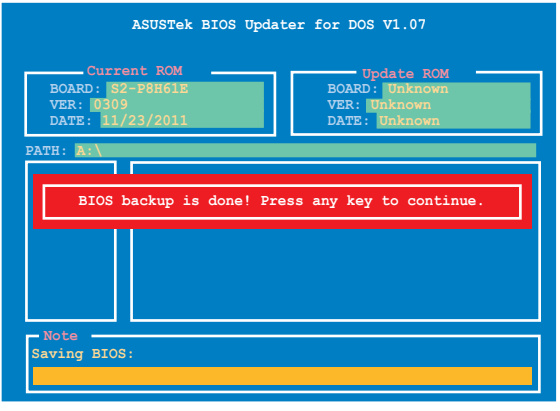
1. At the FreeDOS prompt, type **bupdater /o[filename]** and press <Enter>.

```
D:\>bupdater /oOLDBIOS1.rom
```

Filename Extension

The [filename] is any user-assigned filename with no more than eight alphanumeric characters for the filename and three alphanumeric characters for the extension.

2. The BIOS Updater backup screen appears indicating the BIOS backup process. When BIOS backup is done, press any key to return to the DOS prompt.

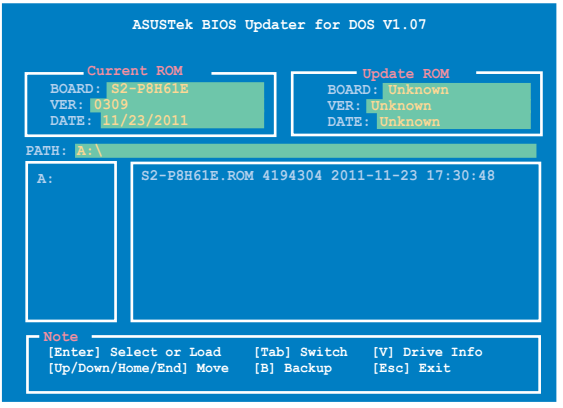


Updating the BIOS file

1. At the FreeDOS prompt, type **`bupdater /pc /g`** and press <Enter>.

```
D:\>bupdater /pc /g
```

2. The BIOS Updater screen appears as below.



3. Press <Tab> to switch between screen fields and use the <Up/Down/Home/End> keys to select the BIOS file and press <Enter>. BIOS Updater checks the selected BIOS file and prompts you to confirm BIOS update.

4. Select Yes and press <Enter>. When BIOS update is done, press <ESC> to exit BIOS Updater. Restart your computer.

DO NOT shut down or reset the system while updating the BIOS to prevent system boot failure!

- For BIOS Updater version 1.04 or later, the utility automatically exits to the DOS prompt after updating BIOS.
- Ensure to load the BIOS default settings to ensure system compatibility and stability. Select the **Load Optimized Defaults** item under the **Exit** menu. Refer to section **4.8 Exit menu** for details.
- Ensure to connect all SATA hard disk drives after updating the BIOS file if you have disconnected them.

4.2 BIOS setup program

Use the BIOS Setup program to update the BIOS or configure its parameters. The BIOS screens include navigation keys and brief online help to guide you in using the BIOS Setup program.

Entering BIOS Setup at startup

To enter BIOS Setup at startup:

- Press **<Delete>** during the Power-On Self-Test (POST). If you do not press **<Delete>**, POST continues with its routines.

Entering BIOS Setup after POST

To enter BIOS Setup after POST, do any of the following:

- Press **<Ctrl> + <Alt> + <Delete>** simultaneously.
- Press the reset button on the system chassis.
- Press the power button to turn the system off then turn it back on. Do this option only if you failed to enter BIOS Setup using the first two options.

Using the **power button**, **reset button**, or the **<Ctrl>+<Alt>+<Del>** keys to force reset from a running operating system can cause damage to your data or system. We recommend to always shut-down the system properly from the operating system.

- The BIOS setup screens shown in this section are for reference purposes only, and may not exactly match what you see on your screen.
- Ensure that a USB mouse is connected to your motherboard if you want to use the mouse to control the BIOS setup program.
- The default BIOS settings for this motherboard apply for most conditions to ensure optimum performance. If the system becomes unstable after changing any BIOS settings, load the default settings to ensure system compatibility and stability. Select the **Load Default Settings** item under the Exit Menu. See section **4.8 Exit Menu**.
- If the system fails to boot after changing any BIOS setting, try to clear the CMOS and reset the motherboard to the default value. Refer to section **3.3 Jumper** on how to erase the RTC RAM.
- The BIOS setup program does not support the bluetooth devices.

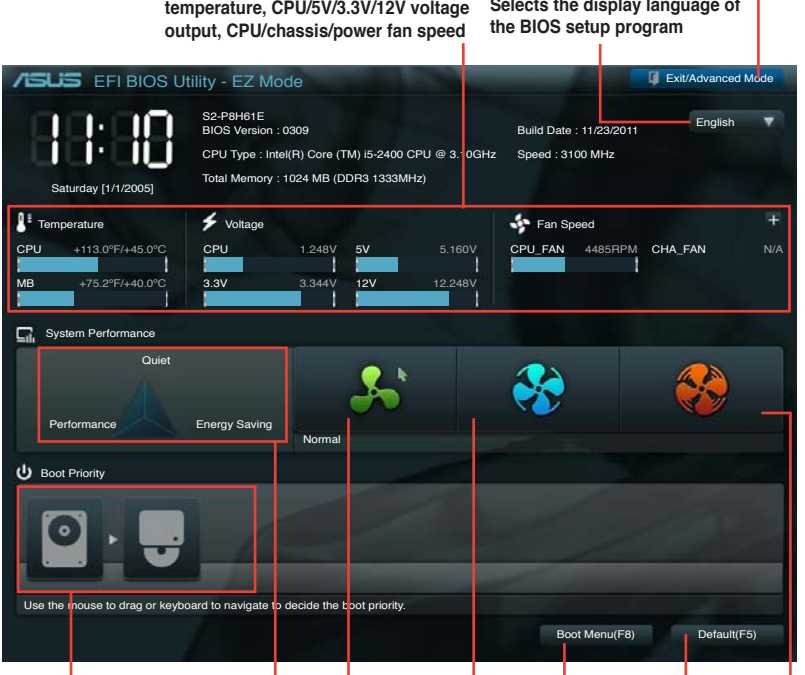
BIOS menu screen

The BIOS setup program can be used under two modes: EZ Mode and Advanced Mode. You can change modes from the Exit menu or from the Exit/Advanced Mode button in the EZ Mode/Advanced Mode screen.

EZ Mode

By default, the EZ Mode screen appears when you enter the BIOS setup program. The EZ Mode provides you an overview of the basic system information, and allows you to select the display language, system performance mode and boot device priority. To access the Advanced Mode, click Exit/Advanced Mode, then select Advanced Mode.

The default screen for entering the BIOS setup program can be changed. Refer to the **Setup Mode** item in **section 4.6 Boot memu** for details.

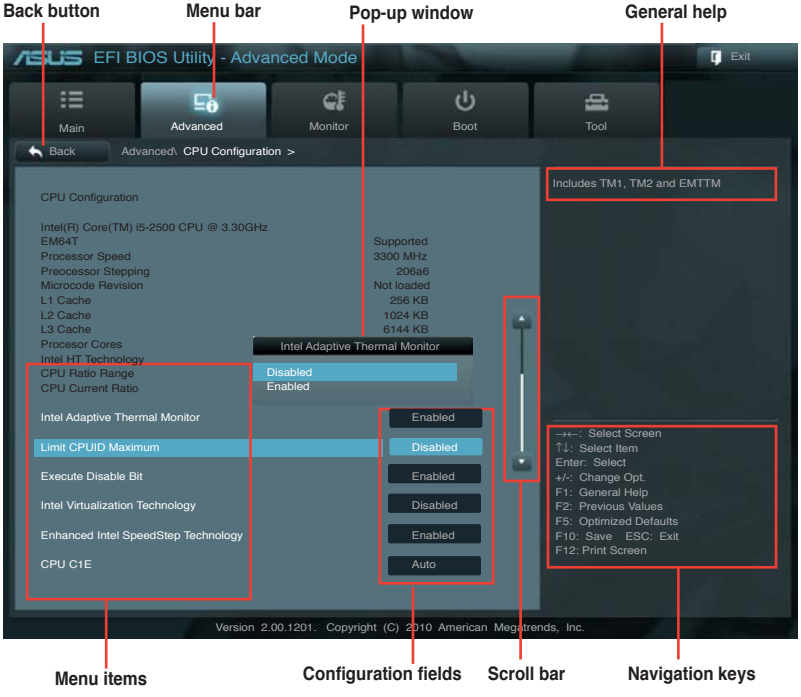

Exits the BIOS setup program without saving the changes, saves the changes and resets the system, or enters the Advanced Mode
Displays the CPU/motherboard temperature, CPU/5V/3.3V/12V voltage output, CPU/chassis/power fan speed
Selects the display language of the BIOS setup program
EFI BIOS Utility - EZ Mode
Exit/Advanced Mode
S2-P8H61E
BIOS Version : 0309
Build Date : 11/23/2011
English
CPU Type : Intel(R) Core (TM) i5-2400 CPU @ 3.10GHz
Speed : 3100 MHz
Total Memory : 1024 MB (DDR3 1333MHz)
Saturday [1/1/2005]
Temperature
CPU +113.0°F/+45.0°C
MB +75.2°F/+40.0°C
Voltage
CPU 1.248V
5V 5.160V
3.3V 3.344V
12V 12.248V
Fan Speed
CPU_FAN 4485RPM
CHA_FAN N/A
System Performance
Quiet
Performance
Energy Saving
Normal
Boot Priority
Use the mouse to drag or keyboard to navigate to decide the boot priority.
Boot Menu(F8)
Default(F5)
Selects the boot device priority
Displays the system properties of the selected mode on the right hand side
Power Saving mode
Normal mode
Loads optimized default
ASUS Optimal mode
Selects the boot device priority

- The boot device options vary depending on the devices you installed to the system.
- The **Boot Menu(F8)** button is available only when the boot device is installed to the system.

Advanced Mode

The Advanced Mode provides advanced options for experienced end-users to configure the BIOS settings. The figure below shows an example of the Advanced Mode. Refer to the following sections for the detailed configurations.

To access the EZ Mode, click **Exit**, then select **ASUS EZ Mode**.



Menu bar

The menu bar on top of the screen has the following main items:

Main	For changing the basic system configuration
Advanced	For changing the advanced system settings
Monitor	For displaying the system temperature, power status, and changing the fan settings
Boot	For changing the system boot configuration
Tool	For configuring options for special functions
Exit	For selecting the exit options and loading default settings

Menu items

The highlighted item on the menu bar displays the specific items for that menu. For example, selecting **Main** shows the Main menu items.

The other items (Ai Tweaker, Advanced, Monitor, Boot, Tool, and Exit) on the menu bar have their respective menu items.

Back button

This button appears when entering a submenu. Press <Esc> or use the USB mouse to click this button to return to the previous menu screen.

Submenu items

A greater than sign (>) before each item on any menu screen means that the item has a submenu. To display the submenu, select the item and press <Enter> or double-click the item.

Pop-up window

Select a menu item and press <Enter> to display a pop-up window with the configuration options for that item.

Scroll bar

A scroll bar appears on the right side of a menu screen when there are items that do not fit on the screen. Press the Up/Down arrow keys or <Page Up> / <Page Down> keys to display the other items on the screen.

Navigation keys

At the bottom right corner of the menu screen are the navigation keys for the BIOS setup program. Use the navigation keys to select items in the menu and change the settings.

General help

At the top right corner of the menu screen is a brief description of the selected item.

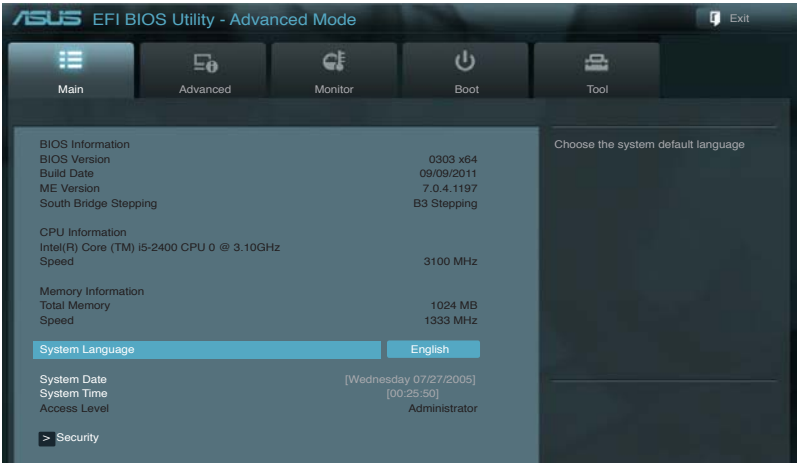
Configuration fields

These fields show the values for the menu items. If an item is user-configurable, you can change the value of the field opposite the item. You cannot select an item that is not user-configurable.

A configurable field is highlighted when selected. To change the value of a field, select it and press <Enter> or click on it to display a list of options.

4.3 Main menu

The Main menu screen appears when you enter the Advanced Mode of the BIOS Setup program. The Main menu provides you an overview of the basic system information, and allows you to set the system date, time, language, and security settings.



4.3.1 System Language [English]

Allows you to choose the BIOS language version from the options. Configuration options: [English] [Français] [Deutsch] [简体中文] [繁體中文] [日本語]

4.3.2 System Date [Day xx/xx/xxxx]

Allows you to set the system date.

4.3.3 System Time [xx:xx:xx]

Allows you to set the system time.

4.3.4 Security

The Security menu items allow you to change the system security settings.

- If you have forgotten your BIOS password, erase the CMOS Real Time Clock (RTC) RAM to clear the BIOS password. See section **3.3 Jumper** for information on how to erase the RTC RAM.
- The **Administrator** or **User Password** items on top of the screen show the default **Not Installed**. After you set a password, these items show **Installed**.

Administrator Password

If you have set an administrator password, we recommend that you enter the administrator password for accessing the system. Otherwise, you might be able to see or change only selected fields in the BIOS setup program.

To set an administrator password:

1. Select the **Administrator Password** item and press <Enter>.
2. From the **Create New Password** box, key in a password, then press <Enter>.
3. Confirm the password when prompted.

To change an administrator password:

1. Select the **Administrator Password** item and press <Enter>.
2. From the **Enter Current Password** box, key in the current password, then press <Enter>.
3. From the **Create New Password** box, key in a new password, then press <Enter>.
4. Confirm the password when prompted.

To clear the administrator password, follow the same steps as in changing an administrator password, but press <Enter> when prompted to create/confirm the password. After you clear the password, the **Administrator Password** item on top of the screen shows **Not Installed**.

User Password

If you have set a user password, you must enter the user password for accessing the system. The **User Password** item on top of the screen shows the default **Not Installed**. After you set a password, this item shows **Installed**.

To set a user password:

1. Select the **User Password** item and press <Enter>.
2. From the **Create New Password** box, key in a password, then press <Enter>.
3. Confirm the password when prompted.

To change a user password:

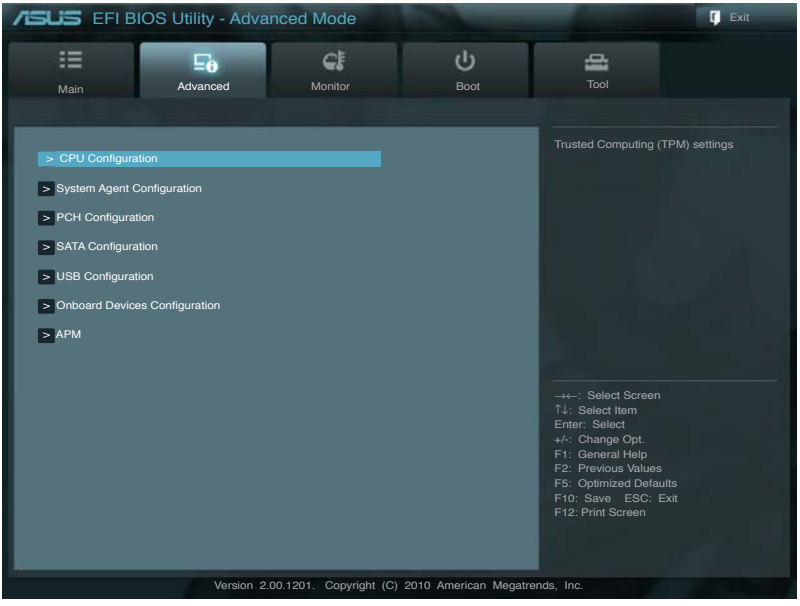
1. Select the **User Password** item and press <Enter>.
2. From the **Enter Current Password** box, key in the current password, then press <Enter>.
3. From the **Create New Password** box, key in a new password, then press <Enter>.
4. Confirm the password when prompted.

To clear the user password, follow the same steps as in changing a user password, but press <Enter> when prompted to create/confirm the password. After you clear the password, the **User Password** item on top of the screen shows **Not Installed**.

4.4 Advanced menu

The Advanced menu items allow you to change the settings for the CPU and other system devices.

Be cautious when changing the settings of the Advanced menu items. Incorrect field values can cause the system to malfunction.



4.4.1 CPU Configuration

The items in this menu show the CPU-related information that the BIOS automatically detects.

The items shown in submenu may be different due to the CPU you installed.

Intel Adaptive Thermal Monitor [Enabled]

[Enabled] Enables the overheated CPU to throttle its clock speed to cool down.

[Disabled] Disables the CPU thermal monitor function.

Limit CPUID Maximum [Disabled]

[Enabled] Allows legacy operating systems to boot even without support for CPUs with extended CPUID functions.

[Disabled] Disables this function.

Execute Disable Bit [Enabled]

[Enabled] Enables the No-Execution Page Protection Technology.

[Disabled] Forces the XD feature flag to always return to zero (0).

Intel(R) Virtualization Technology [Disabled]

[Enabled] Allows a hardware platform to run multiple operating systems separately and simultaneously, enabling one system to virtually function as several systems.

[Disabled] Disables this function.

Enhanced Intel SpeedStep Technology [Enabled]

Allows you to enable or disable the Enhanced Intel® SpeedStep Technology (EIST).

[Disabled] The CPU runs at its default speed.

[Enabled] The operating system controls the CPU speed.

CPU C1E [Auto]

This item allows you to enable or disable the C1E support function. This item should be enabled in order to enable the Enhanced Halt State. Configuration options: [Auto] [Enabled] [Disabled]

CPU C3 Report [Auto]

Allows you to disable or enable the CPU C3 report to OS.
Configuration options: [Auto] [Disabled] [Enabled]

CPU C6 Report [Auto]

Allows you to disable or enable the CPU C6 report to OS.
Configuration options: [Auto] [Enabled] [Disabled]

Hyper-threading [Enabled]

The Intel Hyper-threading Technology allows a hyper-threading processor to appear as two logical processors to the operating system, allowing the operating system to schedule two threads or processes simultaneously.

[Enabled] Two threads per activated core are enabled.

[Disabled] Only one thread per activated core is enabled.

4.4.2 System Agent Configuration

The System Agent Configuration menu allows you to change the northbridge chipset settings.

Initiate Graphic Adapter [PEG/iGPU]

Allows you to decide which graphics controller to use as the primary boot device.
Configuration options: [iGPU] [PEG/iGPU]

iGPU Memory [64M]

Allows you to set the Internal Graphics Device share memory size.
Configuration options: [32M] [64M] [96M] [128M]

Render Standby [Enabled]

Allows you to enable or disable Render Standby by Internal Graphics Device.
Configuration options: [Disabled] [Enabled]

iGPU Multi-Monitor [Disabled]

Allows you enable or disable Internal Graphics Device Multi-Monitor Support for add-on VGA devices. Configuration options: [Disabled] [Enabled]

4.4.3 PCH Configuration

The South Bridge menu allows you to change the PCH settings.

High Precision Timer [Enabled]

Allows you to enable or disable the High Precision Event Timer.
Configuration options: [Enabled] [Disabled]

4.4.4 SATA Configuration

While entering Setup, the BIOS automatically detects the presence of SATA devices. The SATA Port items show **Not Present** if no SATA device is installed to the corresponding SATA port.

SATA Mode [IDE Mode]

Allows you to set the SATA configuration.

[Disabled] Disables the SATA function.

[IDE Mode] Set to [IDE Mode] when you want to use the Serial ATA hard disk drives as Parallel ATA physical storage devices.

[AHCI Mode] Set to [AHCI Mode] when you want the SATA hard disk drives to use the AHCI (Advanced Host Controller Interface). The AHCI allows the onboard storage driver to enable advanced Serial ATA features that increases storage performance on random workloads by allowing the drive to internally optimize the order of commands.

Serial-ATA Controller 0 [Enhanced]

This item appears only when you set the **SATA Mode** item to [IDE Mode].

[Disabled] Disables the SATA function.

[Enhanced] Set to [Enhanced] to support more than four SATA devices.

[Compatible] Set to [Compatible] when using Windows 98/NT/2000/MS-DOS. Up to four SATA devices are supported under these operating systems.

S.M.A.R.T. Status Check [Enabled]

S.M.A.R.T. (Self-Monitoring, Analysis and Reporting Technology) is a monitor system. When read/write of your hard disk errors occur, this feature allows the hard disk to report warning messages during the POST. Configuration options: [Enabled] [Disabled]

4.4.5 USB Configuration

The items in this menu allow you to change the USB-related features.

The USB Devices item shows the auto-detected values. If no USB device is detected, the item shows None.

Legacy USB Support [Enabled]

[Enabled] Enables the support for USB devices on legacy operating systems (OS).

[Disabled] The USB devices can be used only for the BIOS setup program.

[Auto] Allows the system to detect the presence of USB devices at startup. If detected, the USB controller legacy mode is enabled. If no USB device is detected, the legacy USB support is disabled.

Legacy USB3.0 Support [Enabled]

[Enabled] Enables the support for USB 3.0 devices on legacy operating systems (OS).

[Disabled] Disables the function.

EHCI Hand-off [Disabled]

[Enabled] Enables the support for operating systems without an EHCI hand-off feature.

[Disabled] Disables the function.

4.4.6 Onboard Devices Configuration

HD Audio Controller [Enabled]

[Enabled] Enables the High Definition Audio Controller.

[Disabled] Disables the controller.

The following item appears only when you set the **HD Audio Controller** item to [Enabled].

Realtek LAN Controller [Enabled]

[Enabled] Enables the Realtek LAN controller.

[Disabled] Disables the controller.

Realtek PXE OPROM [Disabled]

This item appears only when you set the previous item to [Enabled] and allows you to enable or disable the PXE OptionRom of the Realtek LAN controller.
Configuration options: [Enabled] [Disabled]

Asmedia USB 3.0 Controller [Enabled]

[Enabled] Enables the onboard USB 3.0 controller.

[Disabled] Disables the controller.

Asmedia USB 3.0 Battery Charging Support [Disabled]

This item appears only when the Asmedia USB 3.0 Controller item is set to [Enabled].

[Enabled] Enables the Asmedia USB 3.0 battery charging function.

[Disabled] Disables this function

4.4.7 APM

Restore AC Power Loss [Power Off]

[Power On] The system goes into on state after an AC power loss.

[Power Off] The system goes into off state after an AC power loss.

[Last State] The system goes into either off or on state, whatever the system state was before the AC power loss.

WOL (include AC Power Loss) [Disabled]

[Disabled] Disables the Wake On LAN after a power failure (G3 state) function.

[Enabled] Enables the Wake On LAN after a power failure (G3 state) function.

Power On By PS/2 Keyboard [Disabled]

[Disabled] Disables the Power On by a PS/2 keyboard.

[Space Bar] Sets the Space Bar on the PS/2 keyboard to turn on the system.

[Ctrl-Esc] Sets the Ctrl+Esc key on the PS/2 keyboard to turn on the system.

[Power Key] Sets Power key on the PS/2 keyboard to turn on the system. This feature requires an ATX power supply that provides at least 1A on the +5VSB lead.

Power On By PS/2 Mouse [Disabled]

[Disabled] Disables the Power On by a PS/2 mouse.

[Enabled] Enables the Power On by a PS/2 mouse. This feature requires an ATX power supply that provides at least 1A on the +5VSB lead.

Power On By PCIE [Disabled]

[Disabled] Disables the PCIE devices to generate a wake event.

[Enabled] Enables the PCIE devices to generate a wake event.

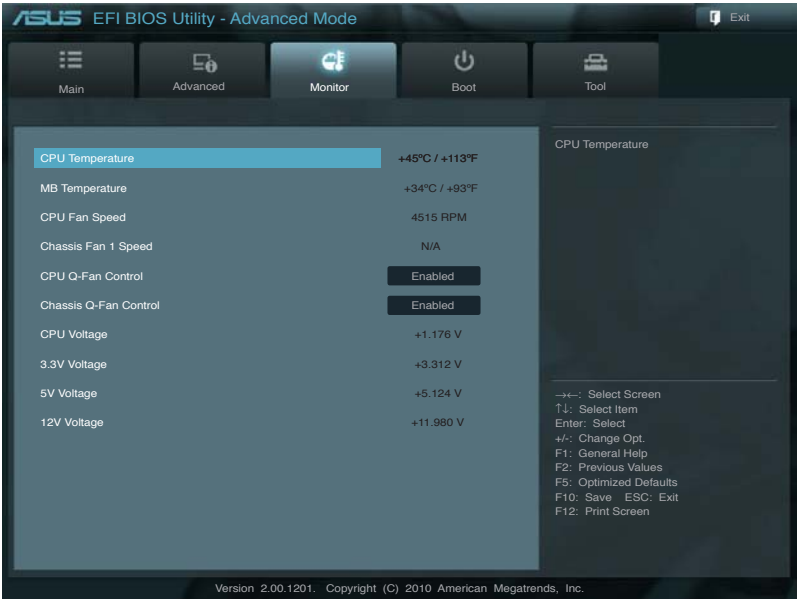
Power On By RTC [Disabled]

[Disabled] Disables RTC to generate a wake event.

[Enabled] When set to [Enabled], the items **RTC Alarm Date (Days)** and **Hour/ Minute/Second** will become user-configurable with set values.

4.5 Monitor menu

The Monitor menu displays the system temperature/power status, and allows you to change the fan settings.



4.5.1 CPU Temperature / MB Temperature [xxx°C/xxx°F]

The onboard hardware monitor automatically detects and displays the CPU and motherboard temperatures. Select **Ignore** if you do not wish to display the detected temperatures.

4.5.2 CPU / Chassis Fan 1 Speed [xxxx RPM] or [Ignore] / [N/A]

The onboard hardware monitor automatically detects and displays the CPU, chassis, and power fan speeds in rotations per minute (RPM). If the fan is not connected to the motherboard, the field shows **N/A**. Select **Ignore** if you do not wish to display the detected speed.

4.5.3 CPU Q-Fan Control [Enabled]

[Disabled] Disables the CPU Q-Fan control feature.

[Enabled] Enables the CPU Q-Fan control feature.

4.5.4 Chassis Q-Fan Control [Enabled]

[Disabled] Disables the Chassis Q-Fan control feature.

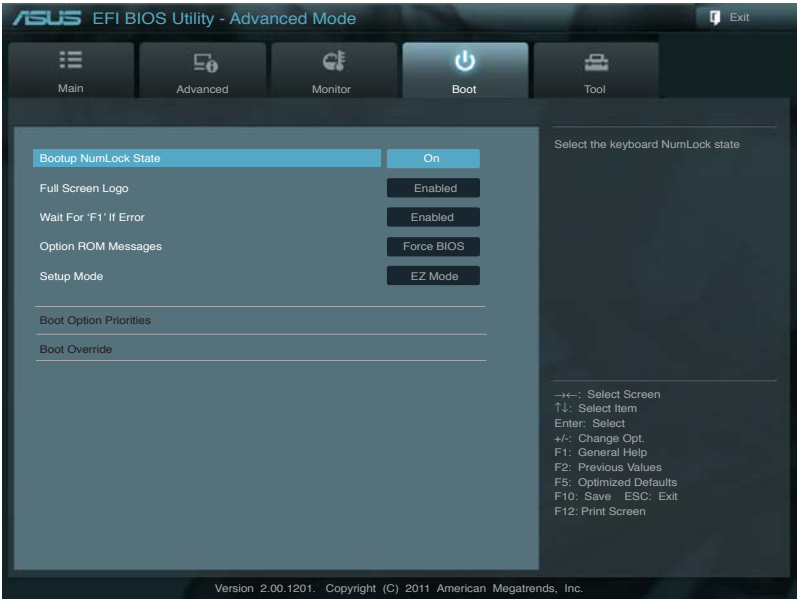
[Enabled] Enables the Chassis Q-Fan control feature.

4.5.5 CPU Voltage, 3.3V Voltage, 5V Voltage, 12V Voltage

The onboard hardware monitor automatically detects the voltage output through the onboard voltage regulators. Select **Ignore** if you do not want to detect this item.

4.6 Boot menu

The Boot menu items allow you to change the system boot options.



4.6.1 Bootup NumLock State [On]

[On] Sets the power-on state of the NumLock to [On].

[Off] Sets the power-on state of the NumLock to [Off].

4.6.2 Full Screen Logo [Enabled]

[Enabled] Enables the full screen logo display feature.

[Disabled] Disables the full screen logo display feature.

Set this item to [Enabled] to use the ASUS MyLogo 2™ feature.

4.6.3 Wait for 'F1' If Error [Enabled]

When this item is set to **[Enabled]**, the system waits for the F1 key to be pressed when error occurs. Configuration options: [Disabled] [Enabled]

4.6.4 Option ROM Messages [Force BIOS]

[Force BIOS] The third-party ROM messages will be forced to display during the boot sequence.

[Keep Current] The third-party ROM messages will be displayed only if the third-party manufacturer had set the add-on device to do so.

4.6.5 Setup Mode [EZ Mode]

[Advanced Mode] Sets Advanced Mode as the default screen for entering the BIOS setup program.

[EZ Mode] Sets EZ Mode as the default screen for entering the BIOS setup program.

4.6.6 Boot Option Priorities

These items specify the boot device priority sequence from the available devices. The number of device items that appears on the screen depends on the number of devices installed in the system.

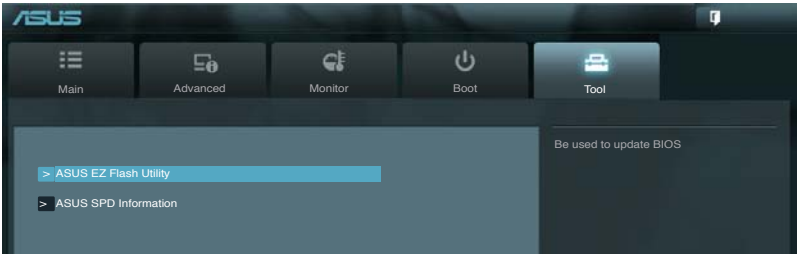
- To select the boot device during system startup, press <F8> when ASUS Logo appears.
- To access Windows OS in Safe Mode, do any of the following:
  - Press <F5> when ASUS Logo appears.
  - Press <F8> after POST.

4.6.7 Boot Override

These items displays the available devices. The number of device items that appears on the screen depends on the number of devices installed in the system. Click an item to start booting from the selected device.

4.7 Tools menu

The Tools menu items allow you to configure options for special functions. Select an item then press <Enter> to display the submenu.



4.7.1 ASUS EZ Flash Utility

Allows you to run ASUS EZ Flash 2. When you press <Enter>, ASUS EZ Flash 2 screen appears.

For more details, refer to section **2.1.2 ASUS EZ Flash 2**.

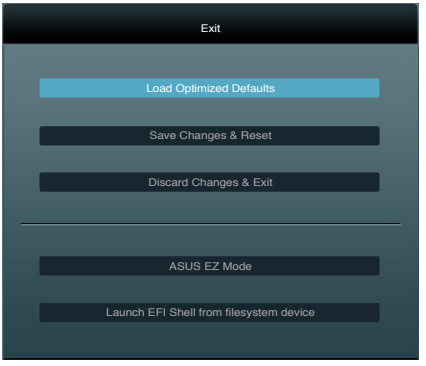
4.7.2 ASUS SPD Information

DIMM Slot # [Slot 1]

Displays the Serial Presence Detect (SPD) information of the DIMM module installed on the selected slot. Configuration options: [Slot 1] [Slot 2]

4.8 Exit menu

The Exit menu items allow you to load the optimal default values for the BIOS items, and save or discard your changes to the BIOS items. You can access the **EZ Mode** from the Exit menu.



Load Optimized Defaults

This option allows you to load the default values for each of the parameters on the Setup menus. When you select this option or if you press <F5>, a confirmation window appears. Select **Yes** to load the default values.

Save Changes & Reset

Once you are finished making your selections, choose this option from the Exit menu to ensure the values you selected are saved. When you select this option or if you press <F10>, a confirmation window appears. Select **Yes** to save changes and exit.

Discard Changes & Exit

This option allows you to exit the Setup program without saving your changes. When you select this option or if you press <Esc>, a confirmation window appears. Select **Yes** to discard changes and exit.

ASUS EZ Mode

This option allows you to enter the EZ Mode screen.

Launch EFI Shell from filesystem device

This option allows you to attempt to launch the EFI Shell application (shellx64.efi) from one of the available filesystem devices.

ASUS contact information

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Technical Support

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Support fax	+1-812-284-0883
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Online contact	www.asus.de/sales

Technical Support

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Support Fax	+49-2102-9599-11
Online support	support.asus.com

*** EUR 0.14/minute from a German fixed landline; EUR 0.42/minute from a mobile phone.**

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Authorised representative in Europe:	ASUS Computer GmbH
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